AUTHOR INDEX

VOLUME 9 NUMBERS 1–6

A

Abell, Liesé L., and **Erwin H. Mosbach.** Hypocholesterolemic activity of 17α-methyl-5α-androstane-3β,17β-diol, a metabolite of 17α-methyltestosterone 98

———. See *Mosbach et al.* 93

Adams, B. G., and **L. W. Parks.** Isolation from yeast of a metabolically active water-soluble form of ergosterol 8

Aftergood, Lilla, H. Joseph Hernandez, and **Roslyn B. Alfin-Slater.** Effect of large doses of the oral contraceptive Enovid on cholesterol metabolism in the rat 447

Ahrens, E. H., Jr. See *Grundy et al.* 374

Akanuma, Yasuo, and **John Glomset.** In vitro incorporation of cholesterol-^{14}C into very low density lipoprotein cholesteryl esters 620

Alburn, Harvey E. See *Lapidus et al.* 371

Alfin-Slater, Roslyn B. See *Aftergood et al.* 447

Amelotti, Josephine M. See *Matschiner and Amelotti* 176

Antony, Garbor J., and **Bernard R. Landau.** Relative contributions of α-, β-, and ω-oxidative pathways to in vitro fatty acid oxidation in rat liver 267

Appelqvist, Lars-Åke, John E. Boynton, Knud W. Henningsen, P. K. Stumpf, and **Diter von Wettstein.** Lipid biosynthesis in chloroplast mutants of barley 513

———, ———, **Paul K. Stumpf,** and **Diter von Wettstein.** Lipid biosynthesis in relation to chloroplast development in barley 425

Avigan, Joel, and **Max Blumer.** On the origin of pristane in marine organisms 350

B

Baker, Nome, Arlene S. Garfinkel, and **Michael C. Schotz.** Hepatic triglyceride secretion in relation to lipogenesis and free fatty acid mobilization in fasted and glucose-refed rats 1

Balint, John A. See *Kyriakides and Balint* 142

Ballard, F. J. See *Hanson and Ballard* 667

Baumann, Wolfgang J., and **Helmut K. Mangold.** Quantitative reactions for the chain elongation of aliphatic compounds 287

———. See Wood and Baumann 733

Baxter, James H. Absorption of chlorophyll phytol in normal man and in patients with Refsum's disease 636

Blumer, Max. See *Avigan and Blumer* 350

Bokkenheuser, Victor. See *Hofmann et al.* 244

Borgström, Bengt. Quantitative aspects of the intestinal absorption and metabolism of cholesterol and β-sitosterol in the rat 473

———. See *Sylvén and Borgström* 596

Boynton, John E. See *Appelqvist et al.* 425, 513

Bray, George A. Lipogenesis from glucose and pyruvate in fat cells from genetically obese rats 681

———, and **H. M. Goodman.** Effects of epinephrine on glucose transport and metabolism in adipose tissue of normal and hypothyroid rats 714

Brecher, Peter I. See *Chobanian et al.* 701

Breckenridge, W. C., and **A. Kuksis.** Specific distribution of short-chain fatty acids in molecular distillates of bovine milk fat 388

Brewer, L. See *Finley et al.* 357

Brien, R. L. See *Lakshamanan et al.* 353

C

Cabrera, Maria. See *Ledeen et al.* 129

Camejo, German, Giuseppe Colacicco, and **Maurice M. Rapport.** Lipid monolayers: interactions with the apoprotein of high density plasma lipoproteins 562

Carter, James R., Jr. Cytidine triphosphate:phosphatidic acid cytidyltransferase in *Escherichia coli* 748

Cherayil, George D. Fatty acid composition of brain glycolipids in Alzheimer's disease, senile dementia, and cerebrocortical atrophy 207

Chobanian, Aram V., Peter I. Brecher, Robert D. Lille, and **Herbert H. Wotiz.** Metabolism of sex hormones in the aortic wall 701

Christiansen, Kirsten. See *Mohrhauer et al.* 398

Christiansen, Philip A. See *Reiser and Christiansen* 606

Clarkson, Thomas B. See *St. Clair et al.* 739

Clayton, R. B. See *Roeske and Clayton* 276

Colacicco, Giuseppe. See *Camejo et al.* 562

Coles, Eric. See *Foote and Coles* 482

Cornwell, David G. See *Ramachandran et al.* 137

Coutts, J. R. T., and **D. A. Stansfield.** Cholesteryl esterase and cholesteryl ester pools in corpus luteum 647

Crouse, John R., Charles D. Gerson, Leonore M. DeCarli, and **Charles S. Lieber.** Role of acetate in the reduction of plasma free fatty acids produced by ethanol in man 509

D

Dallner, Gustav. See *Glaumann and Dallner* 720

Day, Charles E., and **Robert S. Levy.** Determination of the molecular weight of apoprotein subunits from low density lipoprotein by gel filtration 789

DeCarli, Leonore M. See *Crouse et al.* 509

DeLuca, Hector F. See *Roberts and DeLuca* 501

DeMartinis, F. D. See *Yu et al.* 492

Deubig, Manfred. See *Mohrhauer et al.* 398

Dietschy, John M. Mechanisms for the intestinal absorption of bile acids (review) 297

Dils, R. See *Smith et al.* 52

———. See *Watts and Dils* 40

Dodge, James T. See *Phillips et al.* 285

Dvornik, D., and **P. Hill.** Effect of long-term administration of AY-9944, an inhibitor of 7-dehydrocholesterol Δ^7-reductase, on serum and tissue lipids in the rat 587

E

Elliott, William H. See *Siegfried and Elliott* 394

AUTHOR INDEX

VOLUME 9 NUMBERS 1–6

A

Abell, Liesé L., and **Erwin H. Mosbach.** Hypocholesterolemic activity of 17α-methyl-5α-androstane-3β,17β-diol, a metabolite of 17α-methyltestosterone 98

———. See *Mosbach et al.* 93

Adams, B. G., and **L. W. Parks.** Isolation from yeast of a metabolically active water-soluble form of ergosterol 8

Aftergood, Lilla, H. Joseph Hernandez, and **Roslyn B. Alfin-Slater.** Effect of large doses of the oral contraceptive Enovid on cholesterol metabolism in the rat 447

Ahrens, E. H., Jr. See *Grundy et al.* 374

Akanuma, Yasuo, and **John Glomset.** In vitro incorporation of cholesterol-^{14}C into very low density lipoprotein cholesteryl esters 620

Alburn, Harvey E. See *Lapidus et al.* 371

Alfin-Slater, Roslyn B. See *Aftergood et al.* 447

Amelotti, Josephine M. See *Matschiner and Amelotti* 176

Antony, Garbor J., and **Bernard R. Landau.** Relative contributions of α-, β-, and ω-oxidative pathways to in vitro fatty acid oxidation in rat liver 267

Appelqvist, Lars-Åke, John E. Boynton, Knud W. Henningsen, P. K. Stumpf, and **Diter von Wettstein.** Lipid biosynthesis in chloroplast mutants of barley 513

———, ———, **Paul K. Stumpf,** and **Diter von Wettstein.** Lipid biosynthesis in relation to chloroplast development in barley 425

Avigan, Joel, and **Max Blumer.** On the origin of pristane in marine organisms 350

B

Baker, Nome, Arlene S. Garfinkel, and **Michael C. Schotz.** Hepatic triglyceride secretion in relation to lipogenesis and free fatty acid mobilization in fasted and glucose-refed rats 1

Balint, John A. See *Kyriakides and Balint* 142

Ballard, F. J. See *Hanson and Ballard* 667

Baumann, Wolfgang J., and **Helmut K. Mangold.** Quantitative reactions for the chain elongation of aliphatic compounds 287

———. See Wood and Baumann 733

Baxter, James H. Absorption of chlorophyll phytol in normal man and in patients with Refsum's disease 636

Blumer, Max. See *Avigan and Blumer* 350

Bokkenheuser, Victor. See *Hofmann et al.* 244

Borgström, Bengt. Quantitative aspects of the intestinal absorption and metabolism of cholesterol and β-sitosterol in the rat 473

———. See *Sylvén and Borgström* 596

Boynton, John E. See *Appelqvist et al.* 425, 513

Bray, George A. Lipogenesis from glucose and pyruvate in fat cells from genetically obese rats 681

———, and **H. M. Goodman.** Effects of epinephrine on glucose transport and metabolism in adipose tissue of normal and hypothyroid rats 714

Brecher, Peter I. See *Chobanian et al.* 701

Breckenridge, W. C., and **A. Kuksis.** Specific distribution of short-chain fatty acids in molecular distillates of bovine milk fat 388

Brewer, L. See *Finley et al.* 357

Brien, R. L. See *Lakshamanan et al.* 353

C

Cabrera, Maria. See *Ledeen et al.* 129

Camejo, German, Giuseppe Colacicco, and **Maurice M. Rapport.** Lipid monolayers: interactions with the apoprotein of high density plasma lipoproteins 562

Carter, James R., Jr. Cytidine triphosphate:phosphatidic acid cytidyltransferase in *Escherichia coli* 748

Cherayil, George D. Fatty acid composition of brain glycolipids in Alzheimer's disease, senile dementia, and cerebrocortical atrophy 207

Chobanian, Aram V., Peter I. Brecher, Robert D. Lille, and **Herbert H. Wotiz.** Metabolism of sex hormones in the aortic wall 701

Christiansen, Kirsten. See *Mohrhauer et al.* 398

Christiansen, Philip A. See *Reiser and Christiansen* 606

Clarkson, Thomas B. See *St. Clair et al.* 739

Clayton, R. B. See *Roeske and Clayton* 276

Colacicco, Giuseppe. See *Camejo et al.* 562

Coles, Eric. See *Foote and Coles* 482

Cornwell, David G. See *Ramachandran et al.* 137

Coutts, J. R. T., and **D. A. Stansfield.** Cholesteryl esterase and cholesteryl ester pools in corpus luteum 647

Crouse, John R., Charles D. Gerson, Leonore M. DeCarli, and **Charles S. Lieber.** Role of acetate in the reduction of plasma free fatty acids produced by ethanol in man 509

D

Dallner, Gustav. See *Glaumann and Dallner* 720

Day, Charles E., and **Robert S. Levy.** Determination of the molecular weight of apoprotein subunits from low density lipoprotein by gel filtration 789

DeCarli, Leonore M. See *Crouse et al.* 509

DeLuca, Hector F. See *Roberts and DeLuca* 501

DeMartinis, F. D. See *Yu et al.* 492

Deubig, Manfred. See *Mohrhauer et al.* 398

Dietschy, John M. Mechanisms for the intestinal absorption of bile acids (review) 297

Dils, R. See *Smith et al.* 52

———. See *Watts and Dils* 40

Dodge, James T. See *Phillips et al.* 285

Dvornik, D., and **P. Hill.** Effect of long-term administration of AY-9944, an inhibitor of 7-dehydrocholesterol Δ^7-reductase, on serum and tissue lipids in the rat 587

E

Elliott, William H. See *Siegfried and Elliott* 394

Elwood, J. C., and **Harold P. Morris.** Lack of adaptation in lipogenesis by hepatoma 9121 337
Engstrom, Robert G. See *Timms et al.* 675
Evrard, Edmond, and **Gerard Janssen.** Gas–liquid chromatographic determination of human fecal bile acids 226

F

Fallon, Harold J., and **Robert G. Lamb.** Acylation of *sn*-glycerol 3-phosphate by cell fractions of rat liver 652
Fassati, Miloš. See *Šonka et al.* 769
Fassati, Pavel. See *Šonka et al.* 769
Fidge, Noel H., Tatsuji Shiratori, Jagannath Ganguly, and **DeWitt S. Goodman.** Pathways of absorption of retinal and retinoic acid in the rat 103
Finley, T. N., S. A. Pratt, A. J. Ladman, L. Brewer, and **M. B. McKay.** Morphological and lipid analysis of the alveolar lining material in dog lung 357
Folch-Pi, J. See *Gonzalez-Sastre and Folch-Pi* 532
Foote, J. Lindsley, and **Eric Coles.** Cerebrosides of human aorta: isolation, identification of the hexose, and fatty acid distribution 482
Fosbrooke, Audrey S. See *Tamir et al.* 661
Funasaki, Henry, and **John R. Gilbertson.** Isolation and identification of cholesteryl alkyl ethers from bovine cardiac muscle 766

G

Gallian, E. See *Hirsch and Gallian* 110
Galton, David J. Lipogenesis in human adipose tissue 19
Gan, Minerva. See *Mohrhauer et al.* 398
Ganguly, Jagannath. See *Fidge et al.* 103
Gardner, Harold W. Preparative isolation of monogalactosyl and digalactosyl diglycerides by thin-layer chromatography 139
Garfinkel, Arlene S. See *Baker et al.* 1
Gerson, Charles D. See *Crouse et al.* 509
Gidez, Lewis I. Purification of rat pancreatic lipase 794
Gilbertson, John R. See *Funasaki and Gilbertson* 766
Glaumann, Hans, and **Gustav Dallner.** Lipid composition and turnover of rough and smooth microsomal membranes in rat liver 720
Glomset, John A. The plasma lecithin:cholesterol acyltransferase reaction (review) 155
———. See *Akanuma and Glomset* 620
Gonzales-Sastre, F., and **J. Folch-Pi.** Thin-layer chromatography of the phosphoinositides 532
Goodman, DeWitt S. See *Fidge et al.* 103
Goodman, H. M. See *Bray and Goodman* 714
Grant, D. B. See *Tamir et al.* 661
Grant, Norman H. See *Lapidus et al.* 371
Gregorová, Inge. See *Šonka et al.* 769
Grimmer, Gernot. See *Jacob and Grimmer* 730
Grundy, Scott M., E. H. Ahrens, Jr., and **G. Salen.** Dietary β-sitosterol as an internal standard to correct for cholesterol losses in sterol balance studies 374

H

Hanson, Richard W., and **F. J. Ballard.** Citrate, pyruvate, and lactate contaminants of commercial serum albumin 667
Hauser, Susan. See *Shefer et al.* 328
Henningsen, Knud W. See *Appelqvist et al.* 513
Hernandez, H. Joseph. See *Aftergood et al.* 447
Hershfield, Michael S., and **Andrew M. Nemeth.** Placental transport of free palmitic and linoleic acids in the guinea pig 460
Hill, P. See *Dvornik and Hill* 587
Hirsch, Jules, and **E. Gallian.** Methods for the determination of adipose cell size in man and animals 110
Hirsch, Robert L. See *Hofmann et al.* 244
Hofmann, Alan F., Victor Bokkenheuser, Robert L. Hirsch, and **Erwin H. Mosbach.** Experimental cholelithiasis in the rabbit induced by cholestanol feeding: effect of neomycin treatment on bile composition and gallstone formation 244
———, **Patricia A. Szczepanik,** and **Peter D. Klein.** Rapid preparation of tritium-labeled bile acids by enolic exchange on basic alumina containing tritiated water 707
Holman, Ralph T. See *Mohrhauer et al.* 398
Hooper, N. Kim, and **John H. Law.** Mass spectrometry of derivatives of cyclopropene fatty acids 270
Horlick, L. Effect of diethylstilbestrol on skin sterols of the male rat 773
Horrocks, Lloyd A. The alk-1-enyl group content of mammalian myelin phosphoglycerides by quantitative two-dimensional thin-layer chromatography 469
Hoshita, T., S. Shefer, and **E. H. Mosbach.** Conversion of 7α,12α-dihydroxycholest-4-en-3-one to 5α-cholestane-3α,7α,12α-triol by iguana liver microsomes 237
Howard, Charles F., Jr. De novo synthesis and elongation of fatty acids by subcellular fractions of monkey aorta 254

J

Jacob, Jürgen, and **Gernot Grimmer.** Structure and amount of positional isomers of monounsaturated fatty acids in human depot fat 730
Janssen, Gerard. See *Evrard and Janssen* 226
Jezyk, Peter, and **William E. M. Lands.** Specificity of acyl-CoA:phospholipid acyltransferases: solvent and temperature effects 525
Jones, Albert L. See *Ruderman et al.* 613
Joo, C. N., T. Shier, and **M. Kates.** Characterization and synthesis of mono- and diphytanyl ethers of glycerol 782

K

Kates, M. See *Joo et al.* 782
Kean, Edward L. Rapid, sensitive spectrophotometric method for quantitative determination of sulfatides 319
Kelley, Thomas F. Rapid assay of labeled free fatty acids in mixtures of labeled lipids 799
Kelly, Lawrence A. See *Timms et al.* 675
Kennaway, N. G., and **L. I. Woolf.** Splenic lipids in Gaucher's disease 755
Kennedy, Eugene P. See *Schneider and Kennedy* 58
Kim, Young S., and **Norton Spritz.** Metabolism of hydroxy fatty acids in dogs with steatorrhea secondary to experimentally produced intestinal blind loops 487
Kishimoto, Yasuo, Martha Wajda, and **Norman S. Radin.** 6-Acyl galactosyl ceramides of pig brain: structure and fatty acid composition 27
Kleiman, R. See *Tallent and Kleiman* 146
Klein, Peter D. See *Hofmann et al.* 707
Korn, Edward D. See *Smith and Korn* 405
Kostetsky, E. Y. See *Vaskovsky and Kostetsky* 396
Krueger, William. See *Scallen and Krueger* 120

Kuksis, A. See *Breckenridge and Kuksis* 388
———. See *Subbiah and Kuksis* 288
Kupiecki, Floyd P., N. Chandra Sekhar, and **James R. Weeks.** Effects of infusion of some prostaglandins in essential fatty acid-deficient and normal rats 602
Kyriakides, Emilios C., and **John A. Balint.** Quantitative recovery of lecithins after argentation chromatography on thin layers 142

L

Ladman, A. J. See *Finley et al.* 357
Lakshmanan, M. R., W. E. J. Phillips, and **R. L. Brien.** Effect of *p*-chlorophenoxyisobutyrate (CPIB) fed to rats on hepatic biosynthesis and catabolism of ubiquinone 353
Lamb, Robert G. See *Fallon and Lamb* 652
Landau, Bernard R. See *Antony and Landau* 267
Lands, William E. M. See *Jezyk and Lands* 525
———. See *Waku and Lands* 12
Lapidus, Milton, Norman H. Grant, and **Harvey E. Alburn.** Enzymatic preparation and purification of prostaglandin E_2 371
Law, John H. See *Hooper and Law* 270
———. See *Regnier and Law* 541
Ledeen, Robert, Kenneth Salsman, and **Maria Cabrera.** Gangliosides in subacute sclerosing leukoencephalitis: isolation and fatty acid composition of nine fractions 129
Lee, Wen-Hui. See *Paliokas et al.* 143
Levy, Robert S. See *Day and Levy* 789
Lieber, Charles S. See *Crouse et al.* 509
Lille, Robert D. See *Chobanian et al.* 701
Lippel, Kenneth, and **James Allen Olson.** Biosynthesis of β-glucuronides of retinol and of retinoic acid in vivo and in vitro 168
——— and ———. Origin of some derivatives of retinoic acid found in rat bile 580
Lloyd, June K. See *Tamir et al.* 661
Lofland, Hugh B., Jr. See *St. Clair et al.* 739
Lombardi, B., P. Pani, and **F. F. Schlunk.** Choline-deficiency fatty liver: impaired release of hepatic triglycerides 437
Lowry, Robert R. Ferric chloride spray detector for cholesterol and cholesteryl esters on thin-layer chromatograms 397

M

MacBrinn, Monica C., and **John S. O'Brien.** Lipid composition of the nervous system in Refsum's disease 552
Malins, Donald C. Metabolism of glycerol ether-containing lipids in dogfish (*Squalus acanthias*) 687
Mangold, Helmut K. See *Baumann and Mangold* 287
Masoro, E. J. See *Yu et al.* 492
Matschiner, John T., and **Josephine M. Amelotti.** Characterization of vitamin K from bovine liver 176
Mattson, F. H., and **R. A. Volpenhein.** Hydrolysis of primary and secondary esters of glycerol by pancreatic juice 79
McCluer, R. H. See *Siddiqui and McCluer* 366
McKay, M. B. See *Finley et al.* 357
Mohrhauer, Hans, Kirsten Christiansen, Minerva Gan, Manfred Deubig, and **Ralph T. Holman.** Improved method for the preparation of malonyl coenzyme A 398
Moore, Thomas J. Glycerol permeability of human fetal and adult erythrocytes and of a model membrane 642
Morris, Harold P. See *Elwood and Morris* 337
Mosbach, Erwin H., Sarah Shefer, and **Liese L. Abell.** Identification of the fecal metabolites of 17α-methyltestosterone in the dog 93
———. See *Abell and Mosbach* 98
———. See *Hofmann et al.* 244
———. See *Hoshita et al.* 237
———. See *Shefer et al.* 328
Mudd, J. B. See *Ongun et al.* 409, 416

N

Nemeth, Andrew M. See *Hershfield and Nemeth* 460
Nishida, Toshiro. Effect of phospholiphase A treatment of low density lipoproteins on the dextran sulfate–lipoprotein interaction 627
Nobel, Robert P. Electrophoretic separation of plasma lipoproteins in agarose gel 693

O

O'Brien, John S. See *MacBrinn and O'Brien* 552
———. See *Yabuuchi and O'Brien* 65
Olson, James Allen. See *Lippel and Olson* 168, 580
Ongun, Alpaslan, W. W. Thomson, and **J. B. Mudd.** Lipid composition of chloroplasts isolated by aqueous and nonaqueous techniques 409
———, ———, and ———. Lipid fixation during preparation of chloroplasts for electron microscopy 416

P

Paliokas, Auste M., Wen-Hui Lee, and **G. J. Schroepfer, Jr.** Improved separation of sterols by column chromatography 143
Pani, P. See *Lombardi et al.* 437
Parks, L. W. See *Adams and Parks* 8
Pawar, Sitaram S., and **Herbert C. Tidwell.** Effect of ingestion of unsaturated fat on lipolytic activity of rat tissues 334
Peifer, James J. Disproportionately higher levels of myocardial docosahexaenoate and elevated levels of plasma and liver arachidonate in hyperthyroid rats 193
Phillips, Gerald B., James T. Dodge, and **Carole S. Rockmore.** Analysis of fatty acids of human red cells without lipid extraction 285
Phillips, W. E. J. See *Lakshmanan et al.* 353
Picek, Karel. See *Šonka et al.* 769
Pollard, H. See *Scanu et al.* 342
Pratt, S. A. See *Finley et al.* 357

R

Radin, Norman S. See *Kishimoto et al.* 27
Ramachandran, S., P. Venkata Rao, and **David G. Cornwell.** New method for the reductive ozonolysis of double bonds in monoenoic fatty acid methyl esters 137
Rao, P. Venkata. See *Ramachandran et al.* 137
Rapport, Maurice M. See *Camejo et al.* 562
Reader, W. See *Scanu et al.* 342
Regnier, Fred E., and **John H. Law.** Insect pheromones (review) 541
Reinke, Robert T. See *Wilson and Reinke* 85

Reiser, Sheldon, and **Philip A. Christiansen.** Formation of a complex between valine and intestinal mucosal lipid; its possible role in valine absorption 606
Renkonen, Ossi. Chromatographic separation of plasmalogenic, alkyl-acyl, and diacyl forms of ethanolamine glycerophosphatides 34
Richards, Keith C. See *Ruderman et al.* 613
Roberts, Anita B., and **Hector F. DeLuca.** Oxidative decarboxylation of retinoic acid in microsomes of rat liver and kidney 501
Rockmore, Carole S. See *Phillips et al.* 285
Roeske, W. R., and **R. B. Clayton.** Behavior of sterols of insect muscle during homogenization and differential centrifugation 276
Ruderman, Neil B., Keith C. Richards, Victoria Valles de Bourges, and **Albert L. Jones.** Regulation of production and release of lipoproteins by the perfused rat liver 613

S

Salen, G. See *Grundy et al.* 374
Salpeter, M. M., and **D. B. Zilversmit.** The surface coat of chylomicrons: electron microscopy 187
Salsman, Kenneth. See *Ledeen et al.* 129
Scallen, Terence J., and **William Krueger.** Nuclear magnetic resonance and infrared spectra of Δ^{24}- and C-24 saturated steroids 120
Scanu, A., H. Pollard, and **W. Reader.** Properties of human serum low density lipoproteins after modification by succinic anhydride 342
Schlunk, F. F. See *Lombardi et al.* 437
Schneider, Peter B., and **Eugene P. Kennedy.** Metabolism of labeled dihydrosphingomyelin in vivo 58
Schonfeld, Gustav. Uptake and esterification of palmitate by rat diaphragm in vitro 453
Schotz, Michael C. See *Baker et al.* 1
Schroepfer, G. F., Jr. See *Paliokas et al.* 143
Segall, M. M. See *Tamir et al.* 661
Sekhar, N. Chandra. See *Kupiecki et al.* 602
Sessa, Grazia, and **Gerald Weissmann.** Phospholipid spherules (liposomes) as a model for biological membranes (review) 310
Shefer, Sarah, Susan Hauser, and **Erwin H. Mosbach.** 7α-Hydroxylation of cholestanol by rat liver microsomes 328
———. See *Hoshita et al.* 237
———. See *Mosbach et al.* 93
Shier, T. See *Joo et al.* 782
Shiratori, Tatsuji. See *Fidge et al.* 103
Siddiqui, Badruddin, and **R. H. McCluer.** Lipid components of sialosylgalactosylceramide of human brain 366
Siegfried, Charles M., and **William H. Elliott.** Separation of bile acids of rat bile by thin-layer chromatography 394
Smith, Frank R., and **Edward D. Korn.** 7-Dehydrostigmasterol and ergosterol: the major sterols of an amoeba 405
Smith, Stuart, Rodney Watts, and **R. Dils.** Quantitative gas–liquid chromatographic analysis of rodent milk triglycerides 52
Šonka, Jiří, Miloš Fassati, Pavel Fassati, Inge Gregorová, and **Karel Picek.** Serum lipids and dehydroepiandrosterone excretion in normal subjects 769
Spirito, Judith A. See *Timms et al.* 675
Spritz, Norton. See *Kim and Spritz* 487
Ställberg-Stenhagen, Stina. See *Svennerholm and Ställberg-Stenhagen* 215
Stansfield, D. A. See *Coutts and Stansfield* 647
St. Clair, Richard W., Hugh B. Lofland, Jr., and **Thomas B. Clarkson.** Composition and synthesis of fatty acids in atherosclerotic aortas of the pigeon 739
Stumpf, Paul K. See *Appelqvist et al.* 425, 513
Subbiah, M. T., and **A. Kuksis.** Alkaline solvent systems for thin-layer chromatography of bile acids 288
Svennerholm, Lars. Distribution and fatty acid composition of phosphoglycerides in normal human brain 570
——— and **Stina Ställberg-Stenhagen.** Changes in the fatty acid composition of cerebrosides and sulfatides of human nervous tissue with age 215
Sylvén, Christer, and **Bengt Borgström.** Absorption and lymphatic transport of cholesterol in the rat 596
Szczepanik, Patricia A. See *Hofmann et al.* 707

T

Tallent, W. H., and **R. Kleiman.** Bis(trimethylsilyl)acetamide in the silylation of lipolysis products for gas–liquid chromatography 146
Tamir, I., D. B. Grant, Audrey S. Fosbrooke, M. M. Segall, and **June K. Lloyd.** Effects of a single oral load of medium-chain triglyceride on serum lipid and insulin levels in man 661
Thomson, W. W. See *Ongun et al.* 409, 416
Tidwell, Herbert C. See *Pawar and Tidwell* 334
Timms, Alan R., Lawrence A. Kelly, Judith A. Spirito, and **Robert G. Engstrom.** Modification of Lofland's colorimetric semiautomated serum triglyceride determination, assessed by an enzymatic glycerol determination 675

V

Valles de Bourges, Victoria. See *Ruderman et al.* 613
Vaskovsky, V. E., and **E. Y. Kostetsky.** Modified spray for the detection of phospholipids on thin-layer chromatograms 396
Volpenhein, R. A. See *Mattson and Volpenhein* 79
von Wettstein, Diter. See *Appelqvist et al.* 425, 513

W

Wajda, Martha. See *Kishimoto et al.* 27
Waku, Keizo, and **W. E. M. Lands.** Control of lecithin biosynthesis in erythrocyte membranes 12
Wallach, Donald P. Isolation and characterization of four lipolytic preparations from rat skeletal muscle 200
Watts, Rodney, and **R. Dils.** Separation of triglycerides by gas–liquid chromatography 40
———. See *Smith et al.* 52
Weeks, James R. See *Kupiecki et al.* 602
Weinhold, Paul A. Biosynthesis of phosphatidyl choline during prenatal development of the rat lung 262
Weissmann, Gerald. See *Sessa and Weissmann* 310
Wilson, Jean D., and **Robert T. Reinke.** Transfer of locally synthesized cholestrol from intestinal wall to intestinal lymph 85
Wood, Randall, and Wolfgang J. Baumann. Gas–liquid chromatographic analyses of 1,2-ethanediol monoethers and monoesters 733
Woolf, L. I. See *Kennaway and Woolf* 755
Wotiz, Herbert H. See *Chobanian et al.* 701

Wuthier, R. E. Lipids of mineralizing epiphyseal tissues in the bovine fetus 68

Y

Yabuuchi, Hyakuji, and **John S. O'Brien.** Positional distribution of fatty acids in glycerophosphatides of bovine gray matter 65

Yu, B. P., F. D. DeMartinis, and **E. J. Masoro.** Relation of lipid structure of sarcotubular vesicles to Ca^{++} transport activity 492

Z

Zilversmit, D. B. The surface coat of chylomicrons: lipid chemistry 180

———. See *Salpeter and Zilversmit* 187

SUBJECT INDEX

VOLUME 9 NUMBERS 1–6

A

Absorption, intestinal
Of chlorophyll phytol 636
Of cholesterol in rat 596
Of valine; competitive inhibition by other amino acids 606
possible lipid carrier for 606
***Acanthamoeba* (*Neff*):** Sterols of, identification 405
Acetate
GLC determination of 509
Reduction of plasma FFA after ingestion of 509
Active transport: Of bile acids across intestinal mucosa (review) 297
Acyl-CoA synthetase: In human adipose tissue 19
Acyl-CoA:monoacylphospholipid acyltransferase *see* **Acyltransferase:** To monoacyl GPC
Acyltransferase
From acyl CoA to monoacyl GPC 12
From lecithin to cholesterol in plasma (review) 155
In rat liver and caiman liver microsomes 525
To monoacyl GPC; effect of hydrophilic solvents on 525
fatty acid specificity of 525
temperature optimum of 525
Adaptive mechanisms: Absent (for lipogenesis) from hepatoma 337
Adipocyte *see* **Adipose tissue:** Cell
Adipose tissue
Acyl-CoA synthetase in 19
Cell size and cell number in, methods for 110
Fatty acid composition of; in guinea pig (maternal, fetal, fasted) 460
α-Glycerophosphate dehydrogenase in 19
Lipogenesis in, effects of fatty acid on 19
Monounsaturated fatty acids of 730
Of rodents, fatty acid composition of 52
see also **Depot fat**
Adrenal gland: Concentration of sex hormones by 701
Age
Effect of; on dehydroepiandrosterone excretion 769
on serum lipid levels 769
Aging: Effect on brain phosphoglyceride fatty acid composition 570
Albumin
Activation of glycerolphosphate acyltransferase by 652
Effect on palmitate uptake by muscle 453
Interaction with lipid monolayers 562
Albumin, serum
Contaminants of commercial 667
Purification of, with charcoal 667
Aldehydes: GLC of, together with aldehydo-esters 137
Aldehydo-esters: GLC of 137
Allo bile acids *see* **5α-Bile acids**
Allocholic acid: Conversion to allodeoxycholic acid by intestinal flora 244
Allodeoxycholic acid: From allocholic acid by bacterial action 244
Alumina: Tritiated, preparation of 707
Alzheimer's disease: Glycolipid fatty acids in 207
Amino acids: Intestinal absorption of, possible lipid carrier for 606
Amoeba: Sterols of 405
Amylase: Precipitation of, as glycogen complex 794
Anesthesia: Lack of effect on hepatic triglyceride release in Triton-treated rats 1
Antibiotics
Effect of; on fecal bile acid pattern 226
on membranes, model system for 310
see also **Polyene antibiotics**
Aorta
Cerebrosides of, in man 482
Fatty acid composition and biosynthesis in (pigeon) 739
Fatty acid synthesis by subcellular fractions of (monkey) 254
Perfused (pigeon) 739
Apolipoprotein A
Film formation by 562
Interaction with lipids in monolayers 562
Apoprotein
Of low density lipoprotein; molecular weight of, by gel filtration 789
purity of, by gel filtration and ultracentrifugation 789
subunit heterogeneity of 789
L-Arabinose: Use as nonmetabolizable model for glucose 714
Arachidonic acid: Conversion to pure prostaglandin E_2 371
Atherogenic diet: In rat, effect of, plus AY-9944 587
Atherosclerosis
And sex hormone metabolism in arterial wall 701
Aortic cerebrosides in 482
In pigeon, effect on composition and synthesis of fatty acids 739
AY-9944: Long-term administration of, effect on tissue sterol levels (rat) 587
Azure A: In colorimetric determination of sulfatides 319

B

Bacteria: Halophilic, mono- and diphytanyl glycerol ethers from 782
Barley
Lipid synthesis of 425
Wild type and mutants of, lipid synthesis in 513
Behavior: Of insects, and pheromones 541
Bile
Composition of, in cholestanol-induced cholelithiasis (rabbit) 244
Effect on transfer of cholesterol from intestinal wall to lymph 85
Of rat, artifactual products of retinoic acid in 580
Bile acids
Absorption of (review) 297
Allo *see* **5α-Bile acids**

Conjugated and unconjugated, mechanisms for absorption of (review) 297
Conjugated, hydrolysis of 226
Epimers, TLC of 707
Extraction of, from feces 226
Fecal; effect of tetracycline on 226
extraction and determination of, new method for 226
GLC of, as keto compounds obtained by oxidation 226
Inhibition of 7α-hydroxylase by 328
Keto derivatives (by oxidation), GLC of 226
Micelles of, diffusion and absorption (review) 297
TLC of free 394
TLC of, in alkaline systems 288
Tritium-labeled, rapid preparation of 707
5α-Bile acids: Suggested intermediates in biosynthesis of 237
Biosynthesis
Of 5α-cholestane-3β,7α-diol 328
Of cholesterol and lipids, in hepatoma, lack of adaptive response in 337
Of hydrocarbons in liver, effect of CPIB on 353
Of 7α-hydroxycholestanol, by rat liver microsomes 328
Of lipid; and chlorophyll synthesis 425
in barley leaves during greening 425
Of monoenoic acid isomers 730
Of ubiquinone, effect of CPIB on 353
Blind loop: Hydroxy fatty acid metabolism in dogs with 487
Blood–brain barrier: Penetration by AY-9944 587
Bone: Lipids of, during calcification 68
Bovine brain: Gray matter glycerophosphatides of, fatty acid distribution in 65
Bovine liver: Vitamin K in 176
Brain
6′-Acyl cerebrosides in (pig) 27
Cerebrosides and sulfatides, fatty acids of (man) and age 215
Gangliosides of, normal and diseased 129
Lipid composition of, in Refsum's disease 552
Phosphoglycerides of human, with maturation and age 570
Sterol metabolism in, in adult rat 587
see also **Gray matter, White matter**

C

Calamus *see* **Marine organisms**
Calcification: And lipid content of tissue 68
Calcium ions: Sequestration of, prior to TLC of phosphoinositides 532
Campesterol: Degradation of, to nonsteroidal products in intestine 374
Cartilage: Lipids of, during calcification 68
Cation-exchange resin: For recovery of lecithin after argentation TLC 142
CDP diglyceride: Enzymatic formation of, in *E. coli* 748
Cell membrane: Dissimilarity from chylomicron surface coat 187
Centrifugation: Redistribution of sterols during, in cell fractionation 276
Ceramides: 6′-Acyl galactosyl 27
Cerebral cortex: Cerebrosides and sulfatides, fatty acids of (man) and age 215
Cerebrocortical atrophy: Glycolipid fatty acids in 207
Cerebroside sulfate: Colorimetric determination of 319
Cerebrosides
6′-Acyl 27
Fatty acid composition of, in gray matter 207
Of aorta; fatty acid composition of 482
hexose composition of 482
with atherosclerosis 482
Of human brain, fatty acid composition of, with age 215
Related compounds, from aorta, removed by TLC 482
TLC of, preparative 482
Chelation: Inhibition of retinoic acid decarboxylation by 501
Chimyl alcohol: Enzymic cleavage of ether linkage in 687
***p*-Chlorophenoxyisobutyrate** *see* **CPIB**
Chlorophyll
Phytol in, absorption of in man 636
Synthesis of, and lipid synthesis in barley leaves 425
Chloroplast development: And lipid biosynthesis in barley 425
Chloroplasts
Fixation of lipids of, by OsO_4 and $KMnO_4$ 416
Isolation by aqueous and nonaqueous techniques; electron microscopy of 409
glycerolipid composition of 409
Of spinach, fixation of 416
Structure of, in various barley mutants 513
Cholelithiasis: Cholestanol-induced (rabbit), prevented by neomycin 244
5α-Cholestanetriol: Biosynthesis from dihydroxycholestenone by iguana liver microsomes 237
Cholestanol: Cholelithiasis induced by, effect of neomycin on 244
Cholesterol
Absorption of, in rat 473, 596
Bacterial breakdown of 374
Biosynthesis of; by skin of male rat, inhibition by diethylstilbestrol 773
effect of AY-9944 on 587
in hepatoma 337
Δ^{24}-precursors in, NMR spectra of 120
Degradation of, to nonsteroidal products in intestine 374
Endogenous, intestinal, mechanism of transfer to lymph (rat) 85
Fed in triolein and oleic acid to rat 596
Intestinal handling of 374
Intestinal synthesis of, transfer to lymph (rat) 85
Lymphatic transport of, in rat 596
Metabolism of, effect of Enovid on in rat 447
Monolayers of, and protein interaction 562
Ring structure of, presumed degradation of in intestine 374
Role in membrane activity of sarcotubules 492
Solubility of, in triolein in intestine 473
TLC of, spray reagent for 397
Transport of, from peripheral tissues to liver 155
Cholesterol–albumin emulsion: Incubation of, with plasma 620
Cholesterol balance: Bacterial degradation, potential vitiation by 374
Cholesteryl alkyl ethers
GLC of 766
In bovine heart lipids 766
Mass spectrometry of 766
Separation of, from cholesteryl esters 766
TLC of 766
Cholesteryl esterase: In corpus luteum 647
Cholesteryl esters
Effect of Enovid on, in rat 447
Fatty acid composition of, in plasma, effect of Enovid on 447

In corpus luteum, concentration 647
Plasma, source of 155
Cholesteryl ethers *see* **Cholesteryl alkyl ethers**
Cholestyramine feeding: Stimulation of microsomal 7α-hydroxylase by 328
Cholic acid: TLC of 394
Choline: Incorporation of, into phosphatidyl and phosphoryl choline in rat lung 262
Choline deficiency *see* **Fatty liver:** Choline deficiency
Choline glycerophosphatides: Fatty acid positional distribution in (ox) 65
Chromatography, anion-exchange: Artifacts from, in methanol 580
Chromatography, argentation: Of sterols (on alumina) 143
Chromatography, column
Of bile acids, isotope fractionation during 707
Of 17α-methylandrostanediols 93
Of pancreatic lipase 794
Of sterols (Δ^8- from Δ^7-) 143
Chromatography, gas–liquid
Of acetate 509
Of aldehydo-esters from ozonolysis of unsaturated methyl esters 137
Of bile acids (fecal), temperature-programmed 226
Of glycerol monoether and monoester derivatives 733
Of ketocholanoic methyl esters 226
Of 17α-methylandrostanediols 93
Of normal and hydroxy fatty acids 366
Of partial lipolysis products 146
Of trifluoroacetates of glycerol compounds 733
Of triglycerides 40
Of triglycerides of rodent milk 52
Of trimethylsilyl ethers of glycerol compounds 733
Radioactive 425
Temperature-programmed; correction factors in 40
of triglycerides 40
retention indices vs. elution temperatures 40
Chromatography, ion-exchange: Of lipase, on DEAE-cellulose and carboxymethyl-Sephadex C-50 794
Chromatography, paper: Silica gel-loaded, for microsomal neutral lipids 720
Chromatography, thin-layer
Argentation of, lecithins, recovery from 142
Autoxidation, lack of, during 570
Detection of spots, increased sensitivity of 288
Isotope fractionation during 707
Multiple development with nonpolar solvents 34
Of bile acid epimers 707
Of bile acids; conjugated and free, in alkaline systems 288
increased detection sensitivity 288
Of brain phospholipids 570
Of cholesterol and its esters, spray reagent for 397
Of ethanolamine glycerophosphatides 34
Of ethanolamine plasmalogens, with cleavage in situ 469
Of free bile acids 394
Of gangliosides 366
Of mono- and digalactosyl diglycerides 139
Of phosphoinositides 532
Of phospholipids, modified Dittmer–Lester spray for 396
Of prostaglandin E_2 and its methyl ester 371
Of skin sterols 773
Sensitivity of detection of cholesterol in 397
Chromic oxides: In measurement of fecal flow 374
Chylomicrons
Cholesterol of, exchange between surface and core 180
Cholesteryl esters of, exclusively dissolved in core 180
Core lipid and surface material of 180
Membrane *see* **Chylomicrons:** Surface material
Phospholipids of, intracellular origin of 180
Surface coat, electron microscopy of lymph 187
Surface material, methods for separation from core lipid 180
Triglycerides of, derived from dietary fatty acids 180
Circular dichroism: Of succinylated lipoproteins 342
Citrate: Contaminant of serum albumin 667
Clofibrate: Effect of, on mobility of pre-β lipoprotein in agarose electrophoresis 693
Cold adaptation: Hyperthyroid reaction to, and polyunsaturated fatty acid metabolism 193
Collagenase: For dispersion of adipose tissue 110
Colorimetric analysis: Of sulfatides 319
Complex: Of ergosterol and component of yeast 8
Complex formation: Between lipoprotein and dextran sulfate, effect of phospholipase A on 627
Contaminant: 2(diethylhexyl) phthalate, in fatty acid methyl esters 366
Contraceptive drugs: Enovid, and cholesterol metabolism 447
Corpus luteum: Cholesteryl esterase activity in (ox and rat) 647
CPIB: Effect on ubiquinone metabolism in rat liver 353
CTP:phosphatidic acid cytidyltransferase: In *E. coli* 748
Cyclopropene fatty acids
Diketo fatty acids from, mass spectra of 270
Ring position in, determination of 270
Thiol adducts of, mass spectra of 270
Cytidine diphosphate *see* **CDP**
Cytidine triphosphate *see* **CTP**

D

Decarboxylation
Of phytanic acid (enzymic) 350
Of retinoic acid 501
Decenoic acid: Positional isomers of, in human depot fat 730
7-Dehydrocholesterol
Accumulation of, in tissues 587
Δ^7-Reductase, effect of inhibition of on tissue sterols 587
Dehydroepiandrosterone
Excretion of; and serum lipid levels 769
dependence on age 769
7-Dehydrostigmasterol: In amoeba, one of principal sterols 405
Demyelination
Ganglioside determination in 129
In Refsum's disease, possibly due to phytanate accumulation 552
Depot fat: Fatty acids of, positional isomers of monounsaturated 730
Determination: Of sulfatides 319
Dextran sulfate: Complex formation with low density lipoprotein, effect of phospholipase A on 627
Diaphragm: Uptake of palmitate by, in vitro 453
Diet, fat-deficient: Effect on lipogenesis in hepatoma 337
Diethylstilbestrol: Effect of, on skin sterols of male rat 773
Diffusion
As mechanism for cholesterol absorption 596
Of bile acids across intestinal mucosa (review) 297
Digalactosyl diglyceride
Fatty acid pattern and biosynthesis of, in barley genotypes 513

Synthesis of, in greening barley leaves 425
TLC of (preparative) 139
Dihydroceramide: Possible intermediate between dihydrosphingomyelin and dihydrosphingosine 58
Dihydrosphingomyelin: Metabolism of, in rats 58
Dimethyl sulfide: Reduction of ozonides with 137
Dimorphecolic acid: Silylation and GLC of 146
Diol lipids: Synthetic, GLC of 733
Dittmer–Lester spray: (For TLC of phospholipids) effect of ratio of reagents in 396
Docosahexaenoate: Biosynthesis and uptake of, in hyperthyroid rat 193
Dodecenoic acid: Positional isomers of, in human depot fat 730
Dogfish: Metabolism of glycerol ethers in 687
Drugs: Effects on membranes, model system for 310

E

EFA *see* **Essential fatty acids**
Electron microscopy
Fixation of lipids for 416
Of chloroplasts 409, 416
Of chylomicron surface coat 187
Of lipoproteins produced by perfused rat liver 613
Of membranes after phospholipase A, C, and D treatment 492
Electrophoresis: Of plasma lipoproteins, on agarose–agar 693
α-Eleostearic acid: Silylation and GLC of 146
Enovid: Cholesterol metabolism in rat, effect on 447
Epinephrine
Effect on glucose oxidation in adipose tissue, mechanism of 714
Effects on lipolysis and glucose oxidation differentiated 714
Ergosterol
In amoeba, one of principal sterols 405
Water-soluble form of, in yeast 8
Erythrocyte: Membrane of, control of lecithin biosynthesis in 12
Erythrocytes
Adult and infant human, lipid composition and permeability of 642
Fatty acid composition of, total, by hydrolysis of the cells and GLC 285
Hemolysis rates for adults and infants 642
Permeability of, variation with phospholipid composition 642
Phospholipid composition and permeability to glycerol of 642
Escherichia coli: CTP:phosphatidic acid cytidyltransferase in 748
Essential fatty acid deficiency
Effect on activities of sarcotubular membrane 492
Lack of effect of prostaglandins on 602
Essential fatty acids: Enzymic transfer of thiol esters of, to monoacyl GPC 525
Estrogens: Metabolism of, in arterial wall 701
Ethanol: FFA-lowering effect of, possibly mediated by plasma acetate 509
Ethanolamine glycerophosphatides
N-Dinitrophenyl-*O*-methyl derivatives 34
Fatty acid positional distribution in (ox) 65
Plasmalogen content of; by TLC 469
in mammalian central nervous system 469
Separation of alkenyl-acyl, alkyl-acyl, and diacyl 34
Exchange diffusion: Of bile acids in intestinal mucosa 297

F

Facilitated diffusion: Of bile acids in intestinal mucosa 297
Fat cells: From genetically obese rats, lipogenesis in 681
Fat metabolism: In muscle tissue 453
Fatty acid composition
Of brain cerebrosides; 207
and sulfatides (man) 215
Of brain gangliosides 207
Of brain phosphoglycerides with age 570
Of erythrocytes, total, by hydrolysis without lipid extraction 285
Of G_{gal} of brain 366
Of nerve lipids in Refsum's disease 552
Of plasma cholesteryl esters, effect of Enovid on 447
Of rodent milk fat 52
Fatty acids
Biosynthesis of; by aortic subcellular fractions 254
elongation and de novo pathways in aorta 254
from acetyl and malonyl CoA in aorta 254
in atherosclerotic pigeon aorta 739
Chain elongation of, in pigeon aorta 739
Composition of, in atherosclerotic pigeon aorta 739
Desaturation of, in pigeon aorta 739
Elongation of, by subcellular fractions of aorta 254
Extraction of, from scintillator fluid 254
Of brain glycerophosphatides, positional distribution of 65
Oxidation of, α-, β-, and γ-pathways for in rat liver 267
Oxidation pathways, method for determining relative importance of 267
Short-chain, positional specificity in milk triglycerides 388
Unsaturated, mild reactions of without attack on double bonds 287
Uptake by tissues in hyperthyroidism 193
Fatty acyl CoA: In synthesis of lecithin by erythrocyte 12
Fatty alcohols: In insect repellents 541
Fatty liver
Choline deficiency; impaired release of triglycerides from 437
triglyceride content of hepatic microsomes in 437
Feces: Saturated and hydroxy fatty acids in, during steatorrhea 487
Ferric chloride: In TLC spray for cholesterol 397
Ferrous iron: In retinoic acid decarboxylation 501
Fetal lung: Development of phospholipid synthetic pathways in 262
Fetus: Fatty acids of, guinea pig 460
FFA *see* **Free fatty acids**
Free fatty acid:albumin molar ratio: Effect on muscle uptake of FFA 453
Free fatty acids
Effects of, on lipoprotein–dextran sulfate interaction 627
Fetal, proportion from mother in guinea pig 460
In serum, effect of medium-chain triglycerides on 661
Labeled, rapid assay of in other labeled lipids 799
Mobilization of, decreased by glucose refeeding in rat 1
Of plasma; as source of fatty acids in erythrocyte lecithin 12
lowered by acetate ingestion 509
Plasma, lack of effect of prostaglandins on 602

G

G_{gal} *see* **Sialosylgalactosylceramide**
Galactose: Estimation of, nonhydrolytic, in glycolipids 000
Gallstones: Composition of, in cholestanol-induced cholelithiasis (rabbit) 244
Gangliosides
Carbohydrate structure of unusual 129
Composition in subacute sclerosing leukoencephalitis 129
Elevated in spleen in Gaucher's disease 755
Fatty acid composition of; in gray matter 207
individual 129
Minor, of human brain 366
Of gray matter, in senile degenerative disease 207
Separation of, by TLC 129
Sialosylgalactosylceramide in 366
TLC of 366
Gaucher's disease
Ceramide lactoside not elevated in 755
Spleen lipids in 755
Gel electrophoresis: Of lipase (pancreatic) 794
Gel filtration
Of apoprotein of low density lipoprotein 789
Of lipase, on Sephadex G-100 794
GLC *see* **Chromatography, gas–liquid**
Glomset enzyme *see* **Lecithin:cholesterol acyltransferase**
Glucocerebroside: Elevated in spleen in Gaucher's disease 755
Glucose
Complex of, with mucosal lipid 606
Estimation of, nonhydrolytic, in glycolipids 755
Glucose 6-phosphate dehydrogenase: Possible effect of dehydroepiandrosterone on 769
Glucose refeeding: Decreased hepatic triglyceride release following 1
Glucuronyl transferase: In rat liver microsomes 168
Glycerides: Hydrolysis of 2-fatty acids of, by pancreatic enzyme 79
Glycerol
Determination of, enzymatic, modification of 675
Permeation of, through erythrocyte lipid 642
***sn*-Glycerol 3-(dihydrogen phosphate) acyltransferase**
Activation of; by albumin 652
by serum (lipo)proteins 652
Modified spectrophotometric assay for 652
Glycerol esters: GLC of derivatives of 733
Glycerol ethers
Alkyl and alk-1′-enyl, separation of 687
Enzymic cleavage of ether linkage in 687
GLC of; 782
derivatives of 733
IR spectra of 782
Metabolism of, in dogfish 687
Mono- and di-, from halophilic bacteria 782
Nonesterified, monoacyl, and diacyl, separation of 687
Phytanyl, from halophilic bacteria 782
Synthesis of 782
Glycerolipids: Composition of, in chloroplasts 409
Glycerophosphate *see* ***sn*-Glycerol 3-(dihydrogen phosphate)**
L-α-Glycerophosphate dehydrogenase: In human adipose tissue 19
Glycolipids
Ester-type, structure determination of 27
Glycosyl ester-type, in pig brain 27
Of brain in leukoencephalitis 129
Of gray matter, in senile degenerative disease 207
Gray matter
Glycerophosphatides of, fatty acid positional distribution in (ox) 65
Sulfatides of, determination of 319
Guinea pig: Milk triglycerides of 52

H

Halobacterium cutirubrum: Glycerol ethers from 782
Heart: Docosahexaenoate uptake by, in hyperthyroid rat 193
Heart lipids: Cholesteryl ethers in 766
Hemolysis: Of adult and infant erythrocytes, rate of 642
Hepatoma: Lipogenesis in, contrasted with liver 337
Hexadecenoic acid: Increase in serum after ingestion of medium-chain triglycerides 661
Hydrocarbon
Biosynthesis of; effect of CPIB on 353
(pristane) from phytol 350
Hydrolysis: Of fatty acids at 2-position of glycerides 79
Hydroxy acids: Of nervous system lipids, in Refsum's disease 552
Hydroxy fatty acids
Biosynthesis of, by intestinal bacteria 487
Fecal, in steatorrhea 487
In blind loop syndrome 487
Of G_{gal} of brain 366
Possible enterohepatic circulation of 487
7α-Hydroxylation: Of cholestanol, by rat liver microsomes 328
Hyodeoxycholic acid: TLC of 394
Hyperlipoproteinemias: Classification of, with agarose electrophoresis 693
Hyperthyroidism
Effect on cardiac polyunsaturated acids 193
Effect on linolenate vs. linoleate metabolism in rats 193
Hypocholesterolemic agent
17α-Methyl-5α-androstane-3β,17β-diol in dog 98
17α-Methyltestosterone, possible mode of action of 98

I

Iguana: Bile acids of, intermediates in biosynthesis of 237
Infrared spectra: Of Δ^{24}-sterols 120
Inositol glycerophosphatides: Fatty acid composition of, in brain, with age 570
Insect attractants: Review of 541
Insulin
In serum, effect of medium-chain triglycerides on 661
Promotion of entry of glucose into adipose tissue by 714
Intestinal absorption: Of sterols 473
Intestinal bacteria
Hydration of unsaturated fatty acids by 487
Of copepods, possible role in metabolism of phytol in 350
Intestinal flora: Effect on allocholic acid in rabbit 244
Intestinal mucosa
Handling of cholesterol and β-sitosterol by 473
Lipid from, complex with valine 606
Intestinal transit: Rapid, as factor in sterol absorption 473
Intestinal wall: Synthesis and transfer of cholesterol by (rat) 85
Intestine: Small and large, transport of bile acids across (review) 297
Intrinsic viscosity: Of succinylated lipoproteins 342
Isoprenoid fatty acids *see* **Phytanic acid**

Isotope fractionation: Of ^{3}H- and ^{14}C-bile acids during chromatography 707
Isotopic steady state: In cholesterol-fed, formula-fed patients 374

K

9-Ketodecenoic acid: As insect pheromone 541

L

Lactate
Contaminant of serum albumin 667
Oral, lack of effect on plasma FFA 509
LCAT *see* **Lecithin:cholesterol acyltransferase**
Leaf lipids: TLC of 139
Lecithin
Argentation chromatography of, recovery from silver nitrate after 142
see also **Phosphatidyl choline, Choline glycerophosphatides**
Lecithin:cholesterol acyltransferase
Action on plasma lipoprotein fractions 620
Activity of, effect of Enovid on 447
Incorporation of cholesterol into plasma cholesteryl esters via 620
Review of 155
Leucine: Inhibition of valine uptake by 606
Leukoencephalitis *see* **Subacute sclerosing leukoencephalitis**
Linoleate
Accumulation of, in hepatoma 337
Perfused through rat liver, effect on lipoprotein production 613
Linoleic acid
Half-life of, in guinea pig plasma 460
Placental transport of 460
Turnover of, in guinea pig plasma 460
Linolenate: And linoleate, utilization of by hyperthyroid rat 193
Linolenic acid
Biosynthesis of; in greening barley leaves 425
in leaves with chloroplast-differentiation mutation 513
Lipase (pancreatic)
Chromatography of, on DEAE-cellulose, Sephadex, and carboxymethyl-Sephadex C-50 794
Isolation and purification of (rat) 794
Lipases
Measurement (sensitive) of free fatty acids produced by 799
Of muscle (four different types) 200
Lipid spherules
As model for biological membranes (review) 310
see also **Liposomes**
Lipid–protein interactions: In monolayers 562
Lipids
Biosynthesis of, in genotypes of barley 513
Electron microscopy of 416
Extraction of, after fixation of chloroplasts by OsO_4 416
Fixation of, in chloroplasts, by OsO_4 and $KMnO_4$ 416
Of bone and cartilage in bovine fetus 68
Of calcifying tissues 68
Of chloroplasts, fixation for electron microscopy 416
Lipogenesis
From glucose, effect of fasting and refeeding on 1
In genetically obese rats, fat cells from 681
In hepatoma, lack of enzyme control 337
In human adipose tissue, enzymes involved in 19
Slow recovery of, after fasting and refeeding 1
Lipolysis: Unaffected by prostaglandin infusion in rats 602
Lipoprotein lipase
Effect of dietary fat composition on tissue activity of 334
In liver, mucosa, epididymus, and mesentery of rat 334
Lipoproteins
Formation of, relevance of film formation of apolipoprotein to 562
Low density; dextran sulfate interaction 627
phospholipase A treatment and dextran sulfate interaction 627
Production of, by rat liver, in high-linoleate media 613
Release of, by rat liver, in high-linoleate media 613
Size of, produced by perfused rat liver 613
Transfer of cholesteryl esters between 620
Very low density; disappearance of upon glucose refeeding 1
production by perfused rat liver 613
Lipoproteins, plasma
As substrates for acyltransferase (review) 155
Electrophoresis of, rapid, on agarose–agar 693
High density, action of LCAT on 620
Low density; action of LCAT on 620
apoprotein of, molecular weight determination 789
delipidation of 789
Pre-β, variation of mobility of with clinical state 693
Very low density, lack of action of LCAT on 620
Lipoproteins, serum
Activation of glycerolphosphate acyltransferase by 652
High density; delipidated, interaction with lipid monolayers 562
interaction with lipid monolayers 562
lipid of, interaction with proteins 562
Low density; apoprotein of, molecular weight 342
apoprotein of, succinylated 342
succinylated 342
Subunit structure of 342
Succinylation of 342
Liposomes
As model for biological membranes (review) 310
Cholesterol-containing and cholesterol-free (review) 310
Effect of antibiotics, drugs, narcotics, steroids, and toxins on (review) 310
Phospholipid composition of, effect on properties of (review) 310
Liver
Fatty acid composition of, in guinea pig (maternal, fetal, fasted) 460
Rat, rough and smooth microsomes of, lipid composition of 720
Vitamin K in 176
Lymph
Cholesterol in, after cholesterol feeding 596
Cholesterol, source of, in rat 85
Lysolecithin
In biosynthesis of lecithin by erythrocyte 12
Monolayers of, and protein interaction 562
see also **Monoacylglycerophosphoryl choline**
Lung
Lining material of 357
Phosphatidyl choline of, biosynthesis mechanism in rat lung 262
Lung alveolar lining material *see* **Pulmonary surfactant**

M

Malonyl coenzyme A: Improved preparation of 398
***S*-Malonyl-*N*-decanoyl cysteamine:** Transacylation of, to give malonyl CoA 398
Marine organisms: Biosynthesis of pristane by 350
Mass spectrometry: Of cyclopropene fatty acids (derivatives of) 270
Medium-chain triglyceride: Effect on serum lipid and insulin levels in man 661
Membrane: Of erythrocyte, synthesis of lecithin by 12
Membranes
Fixation of lipids in 416
Liposomes as model system for (review) 310
Of chloroplasts, retention of structure after lipid extraction 409
Of microsomes, neutral lipids as integral parts of 720
Menaquinones
Mass spectrometry of 176
TLC of 176
Metabolism: Of sphingomyelins 58
Methanesulfonates: In lengthening methyl esters 287
Methanol: Methylation by, in presence of anion-exchange resin 580
Methyl esters: Chain elongation of (chemical) 287
Methyl retinoate: *cis* Isomer of, in methanol extract of rat bile 580
17α-Methylandrostanediol
GLC of 93
Isomers of, as metabolites of 17α-methyltestosterone in dog 93
17α-Methyltestosterone: Metabolites of, in dog 93
Micelles
Cholesterol in, during absorption 596
Of bile acids, diffusion of during absorption (review) 297
Microsomes
Cholest-4-en-3-one-reducing enzymes in 237
Glucuronyl transferase in (rat liver) 168
Liver and kidney, retinoic acid decarboxylation by 501
Rough and smooth, membrane lipids of 720
Milk fat
Molecular distillate of, triglyceride composition of 388
Triglycerides of, short-chain acid distribution in 388
Milk triglycerides
Fatty acid composition of, independent of that of diet 52
GLC of 40
Monkey *see* **Squirrel monkey**
Monoacyl GPC *see* **Monoacylglycerophosphoryl choline**
1-Monoacylglycerophosphoryl choline: Acylation of, enzyme-catalyzed 525
2-Monoacylglycerophosphoryl choline: Acylation of, enzyme-catalyzed 525
Monoenoic acids: Positional isomers of, in human depot fat 730
Monogalactosyl diglyceride
Fatty acid pattern and biosynthesis of, in barley genotypes 513
Synthesis of, in greening barley leaves 425
TLC of (preparative) 139
Monoglyceride lipases: Of rat skeletal muscle 200
Monolayers: Of lipids, interaction with apolipoprotein A 562
Mouse: Milk triglycerides of 52
Muricholic acids: TLC of 394
Muscle
Free fatty acid uptake and metabolism by 453
Lipases of rat skeletal muscle 200
Myelin: Lipids of, in Refsum's disease 552
Myelin lipids: Plasmalogen content of, by TLC 469

N

Narcotics: Effects on membranes, model system for 310
Neomycin: Effect on bile acid composition in rabbit 244
Nerve, peripheral: Cerebrosides and sulfatides, fatty acid composition of (man) and age 215
Nervous system: Lipid composition of, in Refsum's disease 552
Nuclear magnetic resonance spectra: Of Δ^{24}-sterols 120

O

Obesity, genetic
Effect of parabiotic manipulation on 681
Lipogenesis in rats with 681
Obesity, hypothalamic: Lipogenesis in rats with 681
Oleate-10-^{14}C: In determination of α-, β-, and γ-oxidation pathways 267
Osmium tetroxide: Fixing of adipose tissue cells by 110
Ox *see* **Bovine**
Oxalate: Treatment of Silica Gel H with, for TLC of phosphoinositides 532
Ozonolysis–reduction: Of unsaturated methyl fatty esters 137

P

Palmitate
Esterification of, in muscle tissue 453
Molar relation to albumin, effect on muscle uptake of 453
Uptake of, by rat diaphragm in vitro 453
Palmitic acid
Half-life of, in guinea pig plasma 460
Placental transport of 460
Turnover of, in guinea pig plasma 460
Palmitic acid-16-^{14}C: In determination of α-, β-, and γ-oxidation pathways 267
Pancreatic juice: Presence of two lipases in 79
Pancreatic lipase
Accompanied by nonspecific lipase in pancreatic juice 79
Specificity of 79
Passive transport: Of bile acids, three types of (review) 297
Perfused liver, rat: Production and release of lipoprotein by, effect of FFA on 613
Perfusion: Of pigeon aorta 739
Permeability coefficient: For glycerol across erythrocyte lipid barrier 642
Peroxidation: Cofactors and inhibition of 501
Phenobarbital
Increases neutral and phospholipid contents of microsomes equally 720
Stimulation of microsomal 7α-hydroxylase by 328
Pheophytin *a*: ^{14}C-Labeled, preparation and absorption of 636
Pheromones: Of insects (review) 541
Phosphatidal ethanolamine: Monolayers of, and protein interaction 562
Phosphatidyl choline
Biosynthesis of; in adult and fetal rat lung 262
in erythrocyte 12

Fatty acid composition of, in erythrocyte 12
Monolayers of, and protein interaction 562
Of lymph chylomicrons and of clear lymph, fatty acids of 180
Phosphoglycerides
Complex of, with valine 606
Of brain, composition with age 570
Role of, possible, in amino acid absorption 606
Phosphoinositides: TLC of 532
Phospholipase A
Effect of, on lipoprotein–dextran sulfate interaction 627
Lack of effect on activities of sarcotubular membrane 492
Phospholipase C: Effect on activities of sarcotubular membrane 492
Phospholipase D: Lack of effect on activities of sarcotubular membrane 492
Phospholipid spherules *see* **Liposomes**
Phospholipids
Biosynthetic pathway to, in *E. coli* 748
In choline-deficiency fatty liver, early stages 437
Of bone and cartilage in bovine fetus 68
Of erythrocytes (human), composition of in adult and infant 642
Of leaf lipids, isolation and analysis of by TLC 139
Role in membrane activity of sarcotubules 492
TLC of, modified Dittmer–Lester spray for 396
Phosphoryl choline: Biosynthesis of, from choline, in rat lung 262
Phylloquinone: TLC of 176
Phytanic acid
Biosynthesis of, by copepods 350
Precursor of pristane 350
Source of, in Refsum's disease 636
Phytanyl group: In bacterial glycerol ethers 782
Phytol
Bound (in chlorophyll), absorption of in man 636
Conversion to phytanic acid and pristane by copepods 350
Pigeon: Atherosclerotic aorta of, fatty acid composition and synthesis in 739
Placental transport
Of fatty acids in guinea pig 460
Of linoleic and palmitic acids 460
Plant sterols: Degradation of, to nonsteroidal products in intestine 374
Plasma: Incubation of cholesterol–albumin with 620
Plasmalogens
Cleavage by HCl fumes on TLC plates 469
Determination by TLC 469
In Refsum's disease 552
Neutral *see* **Glycerol ethers:** Alkyl and alk-1′-enyl
Of myelin phospholipids, content in several species 469
Separation from alkyl-acyl and diacyl phosphatides by TLC 34
Polyene antibiotics: Lack of effect on activities of sarcotubular membrane 492
Polyunsaturated acids
Linoleate and linolenate types in brain 570
Metabolism of, in hyperthyroidism 193
Polyunsaturated fat
Dietary, effect on tissue lipolytic activity 334
Effect on serum lipid levels, possible explanations for 334
Pool size
Estimation of by radioactivity dilution method 647
Of cholesteryl esters in corpus luteum 647
Portal system: Absorption of bile acids via 297
Pristane
Biosynthesis of, by copepods, from phytol 350
Origin of, in Nature 350
Prostaglandin E_2
Enzymatic preparation and purification of 371
IR spectrum of (and of methyl ester of) 371
Thiosemicarbazone of, preparation and IR spectrum of 371
TLC of 371
Prostaglandins: Lack of effect on symptoms of EFA deficiency 602
Protein synthesis: For lipoprotein, in perfused rat liver 613
Pulmonary surfactant
Extracted, morphologic resemblance to alveolar lining material in situ 357
Lipid composition of 357
Obtained by endobronchial lavage 357
Pyruvate: Contaminant of serum albumin 667

R

Rabbit: Milk triglycerides of 52
Rat
Bile duct cannulation of, effect on intestinal handling of cholesterol 85
Effect of atherogenic diet plus AY-9944 on 587
Milk triglycerides of 52
Rat bile: TLC of bile acids from 394
Rats, obese: Genetic vs. hypothalamic 681
Refsum's disease
Absorption of chlorophyll phytol in 636
Central and peripheral nervous tissues, lipid composition in 552
Phytanate accumulation in nervous system lipids during 552
Retina: Failure to synthesize retinoyl β-glucuronide by 168
Retinal
Absorption of, in rat 103
Oxidation and reduction of, during absorption 103
Retinoic acid
Absorption of, in rat 103
Artifactual products from, in rat bile 580
Decarboxylation of, by microsomes in vitro 501
β-Glucuronide of, biosynthesis in rat 168
Retinol
O-Ether derivative of, biosynthesis in rat 168
β-Glucuronides of, biosynthesis in rat 168
Retinoyl β-glucuronide
Biosynthesis of 168
Main metabolite of retinoic acid in rat 580
Retinoyl β-glucurono-γ-lactone: Artifactual product from retinoyl β-glucuronide 580
Retinyl esters: In lymph after retinal absorption in rat 103
Retinyl β-glucosiduronate: Biosynthesis of 168
Roach: Sterols of muscle cells, subcellular distribution of 276
Rodents: Milk triglycerides of 52

S

Saimiri sciurens: Aorta of, fatty acid biosynthesis by 254
Sarcotubular membranes
Ca^{++} uptake by, effect of phospholipases on 492
Mg–ATPase activity of, effect of phospholipases on 492
Sciatic nerve: Lipids of, in Refsum's disease 552

Scintillator fluid: Extraction of fatty acids from 254
Sebaceous glands: Atrophy of, reduced by diethylstilbestrol 773
Senile dementia: Glycolipid fatty acids in 207
Serine glycerophosphatides: Fatty acid positional distribution in (ox) 65
Serum cholesterol: Lowering by methyltestosterone metabolite 98
Serum lipids
Effect of age on 769
Levels of, and dehydroepiandrosterone excretion 769
Sex attractants: In insects (review) 541
Sex hormones
Composition of, in arterial wall 701
Metabolism of, in arterial wall 701
Sialosylgalactosylceramide: Of human brain, lipid components of 366
Silver nitrate: Removal of, after argentation TLC 142
Sitosterol: Absorption of, in rat 473
β-Sitosterol
As internal standard in cholesterol balance studies 374
Degradation of, to nonsteroidal products in intestine 374
Lack of conversion to bile acids in man 374
Removal of, from intestinal mucosal cell 473
Skin sterols
Effect of diethylstilbestrol on, in male rat 773
TLC of 773
Smectic mesophase
Review of 310
see also **Liposomes**
Sodium dodecyl sulfate: Solubilization of β-protein by 789
Solvent effects: On phospholipid acyltransferase 525
Species differences: In placental transport of free fatty acids 460
Sphingolipids
6′-Acyl cerebrosides of pig brain 27
Metabolism of dihydrosphingomyelin 58
Sphingomyelin
Of lymph chylomicrons and of clear lymph, fatty acids of 180
Monolayers of, and protein interaction 562
Spinal medulla: Cerebrosides and sulfatides, fatty acid composition of (man) and age 215
Spleen lipids
Gangliosides of, elevated in Gaucher's disease 755
In Gaucher's disease 755
Squirrel monkey *see* ***Saimiri sciureus***
Stearate-18-^{14}C: In determination of α-, β-, and γ-oxidation pathways 267
Stearic acid: Monolayers of, and protein interaction 562
Steatorrhea: Hydroxy fatty acids in 487
Steroids
Biosynthesis of, in greening barley leaves 425
Effects on membranes, model system for 310
Sterols
Distribution in cell fractions during fractionation 276
IR spectra of 120
NMR spectra of 120
Of amoeba 405
Of membranes, stability of binding 276
Of skin *see* **Skin sterols**
Δ^{24}-Sterols: NMR and IR spectra of 120
Stigmasterol: Degradation of, to nonsteroidal products in intestine 374
Subacute sclerosing leukoencephalitis: Gangliosides in 129
Succinylation: Of lipoproteins and apolipoproteins 342
Sulfates
Cholesteryl, colorimetric determination of 319
Colorimetric determination of 319
Fatty alcohol, colorimetric determination of 319
Sulfatides
Colorimetric analysis of 319
Of human brain, fatty acid composition and age 215
Sulfolipids: Colorimetric analysis of 319

T

Taxonomy: Sterols of amoeba and 405
Terpenes: In insect pheromones (review) 541
Testosterone: Metabolism of, in arterial wall 701
Tetracycline: Effect of, on fecal bile acid pattern 226
Tetradecenoic acid: Positional isomers of, in human depot fat 730
TLC *see* **Chromatography, thin-layer**
Tobacco leaves: Chloroplasts of, isolation and lipid composition of 409
Toxins: Effects on membranes, model system for 310
Transport: Of cholesterol, in rat lymph 596
Transport mechanisms: In absorption of bile acids (review) 297
Trifluoroacetates: Of glycerol monoethers and monoesters, GLC of 733
Triglyceride
Effect of, on lipoprotein synthesis in perfused rat liver 613
Medium-chain *see* **Medium-chain triglyceride**
Triglyceride lipase: Of rat skeletal muscle 200
Triglycerides
Determination of; interference of carbohydrate in 675
modification of Lofland's method for 675
Fatty acid distribution in, short-chain, of milk 388
GLC of 52, 388
In choline-deficiency fatty liver, early stages 437
Of plasma, lowered by glucose refeeding, mechanism of 1
Of rodent milk, GLC of 52
Palmitate incorporation into, during Triton test 437
Stereospecific analysis of, in milk 388
Trimethylsilyl ethers: Of glycerol monoethers and monoesters, GLC of 733
Trimethylsilylation
Of lipolysates with bis(trimethylsilyl)acetamide 146
Of mono- and diglycerides 146
With bis(trimethylsilyl)acetamide vs. hexamethyldisilazane plus trimethylchlorosilane 146
Triolein: Fed, effect on cholesterol transport 596
Triton: Use in measuring hepatic triglyceride release 1
Triton test: New modification of 437
Tumor *see* **Hepatoma**

U

Ubiquinone: Effect of CPIB on metabolism of 353
Unsaturated fatty acids: Hydroxylation of, by intestinal bacteria 487
Urea clathrate complexes: Of fatty acids, relation to acyl transfer reactions 525
Uterus: Retention of estradiol by 701

V

Valine
Complex of, with mucosal lipid 606
Transport of, across intestinal mucosa 606
Vernolic acid: Silylation and GLC of 146
Vitamin A *see* **Retinol**
Vitamin K
Mass spectrometry of 176
Of bovine liver, principal forms of 176
TLC of 176
Volatile lipids: In insect pheromones (review) 541

W

White matter
Cerebrosides and sulfatides, fatty acid composition of (man) and age 215
Sulfatides of, determination of 319

X

***xantha* mutants:** Of barley, lipid synthesis in 513

Y

Yeast: Soluble ergosterol complex from 8

NEW METHODS INDEX

Volume 9 Numbers 1–6

Compiled by H. A. I. Newman, Elizabeth Anne Freilich, and Linda Turner

The numbers in this Index refer to Entry Nos. in the New Methods listings. These are found on the pages of Volume 9 given below.

Nos. 1–121, pp. 149–153
Nos. 122–249, pp. 291–295
Nos. 250–357, pp. 399–402
Nos. 358–462, pp. 534–537
Nos. 463–557, pp. 669–672
Nos. 558–626, pp. 801–803

ENTRY NO.

Acyl halides: By GLC 256
Acyl phosphates: Colorimetric determination of 573
Aflatoxins
In green coffee 625
M, in milk, analysis for 624
On thin-layer chromatograms, fluorodensitometric measurement of 623
Qualitative and quantitative determination of 357
Separation of, on deactivated silicic acid 356
Aldehyde: 2,4-Dinitrophenylhydrazones, GLC of 17
Alkylidene analysis: Olefin position in microgram range, by GLC 2
Autoxidation: In fish oil, an improved 2-thiobarbituric acid procedure for the measurement of 80
Bile acids
Conjugates, in normal and lithogenic bile, quantitative estimation of 403
Fecal, fluorimetry of 505
Free, separation of structural isomers of, by chromatography 307
Human blood, measurement of 506
Methanesulfonates and mixed silyl ethers, by GLC 273
Optical rotatory dispersion of 182
Rat, separation by TLC 580
Sensitive, nondestructive method for the demonstration of, on TLC 306
TLC of; on lipophilic Sephadex 308
with alkaline solvent systems 507
Carbonyl: Saturated and α,β-unsaturated, spectrophotometry of, in complex systems at a single wave length 65
Carbonyl compounds
GLC of 17
Identification and resolution of, by TLC 68
Identification of; by GLC 18
by GLC/TLC 141
by TLC 69
In crude spirits 69
Photometric determination of 420
Carotenoids
Carotene and xanthophyll, stabilization of by ethoxyquin during TLC 103
Fluorescence of 106
Identification of, by their adsorption characteristics 100
Keto, detection and identification of 234

ENTRY NO.

Naturally occurring, detection and identification of 234
Separation of water-soluble precursors of steroids and, by DEAE-cellulose column chromatography 489
Ceramide: Paper chromatographic separation of 94
Chick edema factor: In fats and fatty acids, by electron-capture gas chromatography 265
Cholesterol
1,2-^{3}H-; As a tracer in studies of human metabolism 61
Autoxidation products from 57
Effects of tomatine on the Zak colorimetric procedure 56
Esters, separation of by TLC and paper chromatography 512
Extraction procedure, for plasma and serum determination 207
Ferric chloride spray detector for, on thin-layer chromatograms 582
Free, in plasma, TLC of, by single development 384
^{14}C-Labeled, simultaneous quantification of long-chain fatty acids and, by paper chromatography 58
Quantitative TLC of, from rat liver 383
Role of, in stabilizing lecithin monolayers 346
Serum; immunocrit determination of the significance of disagreement between serum β-lipoprotein and 347
TLC rapid separation from triglycerides, phospholipids, cholesterol ester, hydrocortisone, and free fatty acids 385
Standard purity for standardizing measurements in serum for medical diagnosis and therapy 60
Total serum, modified to eliminate the effect of high bilirubin levels 406
Cholesterol uptake: Method for study at the endothelial cell surface in the rabbit aorta 59
Cholesteryl ester
Ferric chloride spray detector for, on thin-layer chromatogram 582
Free, in plasma, TLC of, by single development 384
Quantitative TLC of, from rat liver 383
Serum, TLC rapid separation from phospholipids, triglycerides, cholesterol, hydrocortisone, and free fatty acids 385
Use of a computer in GLC determination of concentration and identification of 249

NEW METHODS INDEX

ENTRY NO.

Cholesteryl sulfate: Human fecal, purified on lipophilic Sephadex gels 509

Chromatography
- Automatic device for adding solvents to tanks 246
- Effect of tailing on the separability of mixtures in 355
- Lipid determination by 30
- Selection of optimum position for measuring width of peaks with minimum error in area 558
- Silica gel, surface area determined by adsorption 244

Chromatography, column
- Improved sample applicator for 114
- Open tubular; general plate-height expression for turbulent flow region in 564
  - 563
- Rat liver and intestine lipids, by silicic acid 149
- Separation of bufo-steroids by 48
- Serum lipids, by micro-, on silicic acid 147
- Silicic acid; adsorption mechanism and solvent systems 350
  - parameters for a binary solvent system 351
- Silver resin, separation of conjugated methyl octadecadienoate and trienoate geometric isomers by 5
- Study of liquid columns with a moving wire detector system 116
- Time of separation in liquid 113
- Use of silicic acid 147, 149

Chromatography, dry-column: Comparable to TLC 460

Chromatography, gas–liquid
- Analysis of aqueous samples by 275
- Apparatus for repeated separations of a sample 16
- Application of isotopic exchange in columns for labeling of organic compounds 368
- Autosampler for solvent-free sample introduction 123
- Behavior of various types of organic compounds on Porapak Q 466
- Chain-length overlap problem with polyester liquid phases 380
- Collecting $^{14}CO_2$ from a hydrogen flame detector 271
- Collection of fractions for IR or NMR spectrometry separated by 257
- Derivatization technique; for identifying alcohols with TLC, for identifying carbonyl compounds 141
- Detector utilizing emitted radiation from a sensitized flame 562
- Determination of glycerol in cosmetics by 258
- Diglyceride analysis by 23
- Direct examination of total lipid extract by 11
- Effects of water on alcohol and esters retention times 142
- Electron-capture detector, measurement of plasma estrogens by 143
- Estradiol, solubility studies of, by 19
- Ethanolamine, by 261
- Ethanolamines as trifluoroacetyl derivatives 125
- Flame ionization detector; chemisorptive substrate to purify air 7
  - logarithmic attenuator for use with 560
- Free fatty acid separation 9
- Identification of carbonyl compounds by 17
- Identification of plant sterols by 10
- Keto acid methyl esters, by 18
- Linear slope of HETP in 565

ENTRY NO.

- Lipolysis products for, silylation with bis(trimethylsilyl)acetamide 374
- Long-chain fatty acid esters, prevention of condensation of 122
- Mass spectrometry and; 10
  - efficiency of molecule separators in 20
  - identification of butterfat from fatty acids by 21
  - investigation of trimethylsilyl ether in vitamin A by 26
  - pyrolysis used in the study of mycolic acids 127
- Molecular separators for interfacing a mass spectrometer with 131
- Monoglyceride analysis by 23
- Of steroid glucuronosides 24
- Olefin position in microgram range of alkylidene by 2
- Open tubular study of structure of fatty acids in 250
- Peak areas in lipid analysis 8
- Preparative synthesis of (+)-methyl 2L,4L-dimethylhexanoate and (−)-methyl 2D,4L-dimethylhexanoate involving separation of diasteroisomers by 15
- Programmed-temperature technique for detecting trace amounts of fatty acids 133
- Proportional counter for assaying carbon-14 and tritium in column effluent of 260
- Pyrolysis, and mass spectroscopy in the study of the structure of mycolic acids 127
- Quantification of digital computer method for, as applied to fatty acid esters 358
- Quantitative measurement; a servomechanism detector for 12
  - hydrogenatable material by 12
  - of diol and triol lipid by 25
  - of fatty acid methyl esters by 13
  - of resin acid methyl esters by 13
  - standard addition method 14
- Quantitative, using retention times 465
- Residual hydrocarbon in solvent-extracted edible oils 27
- Residual hydrocarbon solvents, by 27
- Resolution of enantiomers by 130
- Role of the support in retention measurements 255
- Separation of conjugated methyl octadecadienoate and trienoate geometrc isomers by 5
- Solvent impurity resembling a tocopherol 252
- Terpenoids, evaluation of polyesters as stationary phases in separation of 124
- Use of a computer in determination of concentration and identification of individual fatty acids by 249
- Use of deoxycholic acid in column liquids 135
- Vitamin K, determination by 4

Chromatography, liquid: Quantitative analysis by 245

Chromatography, paper: Higher fatty acids, paper chromatography of, with saccharose 71

Chromatography, thin-layer
- Application of solutions to preparative chromoplates 111
- Automated quantitative spotting for 555
- Automatic device for adding solvents to tanks 246
- Contour 459
- Derivatization technique with GLC for identifying; alcohols 136

NEW METHODS INDEX

ENTRY NO.

carbonyl compounds 141
Detection of lipids by 37
Direct transfer technique for preparing micropellets from, for IR identification 353
Distinguishing between natural rubber and synthetic polyisoprene 97
Foaming properties of alcohol polyethoxylates 121
Gel filtration 461
"Hot Line" technique for detection of substances 622
Identification of carbonyl compounds by 68, 69
Increasing sensitivity of char sprays for the detection of lipids by viewing under UV light 37
17-Ketosteroids, by 157
Plates; development under nitrogen 354
spot applicator for 352
Polyglycerides and their fatty acid esters 22
Preparative, improved method for 462
Quantitative analysis by, using a flame ionization detector 243
Separation of Δ^{16}-C_{19}-steroids by 49
Silver nitrate, detection of rearrangement reactions by 458
Simple attachment to the Zeiss spectrophotometer for direct quantitative determination of fluorescent substances 115
Simple device for the application of samples as narrow streaks for 248
"Strip" developing technique for preparative plates 112
Washing of adsorbents 247

Dermatohistology: Use of the phospholipid detection method in 83

Detergents: Anionic potentiometric titration of sulfate in 119

Digalactosyl diglycerides: Separation of mono- and, from spinach leaves, with Sephadex LH-20 93

Diglycerides
Digalactosyl; preparative isolation of, by TLC 426
separated from mono-, from spinach leaves, with Sephadex LH-20 93
GLC of 23
1,2- and 1,3-, in plasma, TLC of by single development 384
α,β-; IR spectroscopy of 208
trityl method for 208
Monogalactosyl, preparative isolation of, by TLC 426
Quantitative TLC of, from rat liver 383
Triglyceride mixture and, column chromatography of 321

Dihydroxyacetone: Enzymic assay of 206

Dimethyl acetals: Conversion of 2,4-dinitrophenylhydrazones of fatty aldehydes to 202

Dimethyl ethanolamine: From lipids, quantitative GLC of 261

Diol esters: Long-chain, IR spectral shifts 530

Diol ether esters: Long-chain, IR spectral shifts 530

Diol ethers: Long-chain, IR spectral shifts 530

Diol lipids: Quantitative determination of 25

Enzymes: Lipolysis, microbial, double-layer plate method for detection of 457

Esterase
Lipase lipoprotein assay of, using "Intralipid" 241
Lipase serum, rapid photometric method 240

ENTRY NO.

Estradiol: Solubility studies of, by GLC 19

Ethanolamine: Quantitative GLC of 261

Fat
Body, manual analysis of 626
Content of in ground beef, comparison of solvent and thermal techniques for the determination of 278
Differential staining of, in gelatin-embedded frozen sections 481
Enzymatic neutral, in biological material, determination of 484
Extraction of, new apparatus for 279
In meat products, direct spectrophotometric determination of 480
In milk; detection of adulteration with vegetable oils 310
determination by turbidimetrics 285
determination in Dairy Herd Improvement Association 479
homogenized and chocolate, methods for determining butterfat in 76
Margarine, determination of butterfat in by transesterification and GLC 277
Rheological properties of, with an extrusion modification of the shear press 79

Fat-soluble vitamins
11-*cis*-Retinal, spectroscopy and photochemistry of 227
All-*trans*-retinal, spectroscopy and photochemistry of 227

Fats and shortenings: Standardization of nuclear magnetic resonance measurement in 38

Fatty acid esters
Aliphatic hydroxyl determination in, with vanadium oxinate 409
Ethyl, in beef pancreas, by GLC and mass spectrometry 477
Higher, paper chromatography of, with saccharose 71
Long-chain, prevention of condensation of, in GLC 122
Of polyglycerols, GLC of 22
Propylene glycol, in shortening containing mono- and diglycerides, chromatography of 528

Fatty acid ethyl esters
Long-chain, methyl ester and artifacts during extraction of 70
Methyl ester and, of long-chain fatty acids, artifacts during extraction of 70

Fatty acid methyl esters
Artifacts produced during the concentration of methanolic extracts of serum or plasma lipids 32
Branched, GLC rentention time prediction 463
Dimer 9^e,12^e-octadecadiene, structure of 591
Ethyl esters and, artifacts during extraction of 70
GLC of; calibration studies of molar response 372
calibration studies of weight response 373
computer method for quantification 358
fluorinated 6
on the chromatograph LPCH 2009 370
quantitative measurement by 13
GLC, retention time prediction for branched 463
In beef pancreas, GLC and mass spectrometry of 477
Long-chain normal mono-, marked by deuterium and carbon-12, mass spectrometry of 586

ENTRY NO.

Monoenoic, reductive ozonolysis of double bonds in 423
Preparation by photochemical reaction between diazomethane and lipids 422
Resin separation from, by gel-permeation chromatography 595
Resolution of mixtures of keto acid methyl ester 2,4-dinitrophenylhydrazones by TLC 68
Separation from saturated fatty acids by carbon-active silica gel TLC 317
Unsaturated, tritium-labeled in the methyl group 419

Fatty acids

Acetyl CoA and liver extracts, internal standards in the estimation of 191
Acetylenic, NMR spectra of 189
Aliphatic systems, calculation of NMR spectrum of double-bond protons in 590
Alkaline isomerization of linoleyl acetate and octadeca-12-diene 194
Alkyl oleates, oxidized, comparison of column, paper, and thin-layer chromatography 525
Amides, from visceral lipid of fin whale, separation and characterization of 522
C_2–C_6, methanol, and ethyl alcohol, direct quantitative GLC separation of, in aqueous microbial fermentation media 475
Application of indicators in the detection of higher, by TLC 201
Aromatic, determined in hydrated cyclic fatty acids 587
Automatic determination of organic acids 585
Calculation of equivalent chain length values in 1
Carboxylic determination of branched decanoic residues by TLC 315
Carcinolipin, isolation by combined liquid–liquid and liquid–solid chromatography 405
Cholesterol 14-methyl hexadecanoate (carcinolipin), quantitative determination of by chromatography 416
Cyclic, determination of, over uric acid 318
11-Cyclohexylundecanoic, isolation and identification of, from sheep perinephric fat 63
Cycloprenoid, mass spectrometry of 519
Cyclopropane detection in bacterial lipids 584
Decanoic, branched, determination of the residues of, in carboxylic acids by TLC 315
Elaidic, rapid determination of iodine No. with hypoiodous acid 589
Elongation of 526
Epoxides, identification of, on thin-layer plates 517
Ethylenic bonds, localization of by mass spectrometry 185
GLC calculation of equivalent chain length values 1
GLC electron capture, determination of pentachlorophenyll aurate by 361
GLC/mass spectroscopic technique 559
GLC of; 133
identification from butterfat by 21
rapid separation of ricinoleic acid and its impurities by 128
sample introduction in analyses of volatile fatty acids in rumen fluid by 137
Higher; fuchsin dyes in TLC of 592
preparative TLC of 66

ENTRY NO.

Human red cell, analysis of, without lipid extraction 524
Hydrated cyclic, determining aromatic fatty acids in 587
Hydroxamic, TLC of 320
α-Hydroxy, visualizing reagent in paper chromatography 424
In carcinolipin, purification of 417
In plasma and depot fat, nonpolar acids by submicromolar assay 196
Iodine compounds, lipid antioxidant properties of 556
Iodine No. of, with hypoiodous acid of oleic and elaidic 589
Isocyanates, preparation from linseed, safflower, and tall oil 527
Keto; detection by two-dimensional paper chromatography of 2,4-dinitrophenylhydrazones 515
dinitrophenylhydrazones, TLC of 514
spectrophotometric microdetermination of, with 3-methyl-2-benzothiazolone hydrazone 319
α-Keto, visualizing reagent in paper chromatography 424
Laurate, pentachlorophenyl, by GLC and electron capture 361
Linoleate and linolenate analysis of, by isomerization with potassium tertiary butoxide 197
Linoleyl acetate, alkaline isomerization of 194
Liquid scintillation fluid, extraction of chromatographically isolated 192
Long-chain; aliphatic compounds, TLC of 521
isomeric aliphatic compounds, by argentation TLC 316
methyl esters and ethyl esters of, in human serum, artifacts during extraction of 70
simultaneous quantification of cholesterol-^{14}C and, by paper chromatography 581
Malonyl CoA, preparation of 588
9,10-Methylenehexadecanoic by GLC–MS 559
Mercaptans, visualizing reagent in paper chromatography 424
Monoenoic, double bond positions determined by periodate–permanganate oxidation 412
Multiple-branched, GLC of 1
2 Octadeca-12-diene, alkaline isomerization of 194
Octadecadienoic, from ceroplastes pseudoceriferus, isolation and structure of 64
cis-Octadecanoic, NMR spectra of 189
Octadecenoate isomers, by argentation TLC 316
Octadecenoic, from cereoplastes pseudoceriferus, isolation and structure of 64
Olefinic, determination of unsaturation by bromination 414
Oleic, rapid determination of iodine No. with hypoiodous acid 589
Peroxides, cyclic organic, mass spectrometry of 583
Petroselinic, determination of by microreactor chromatography 195
Polyunsaturated, double bond positions in, by GLC and mass spectrometry 266
Quantitative paper chromatography of 190, 200
Quantitative reactions for the chain elongation of aliphatic compounds 513
Rapid estimation of bacterial biosynthesis 312

ENTRY NO.

Saturated; comparison of GLC, thiocyanogen number, and lead salt–ether methods 418
detection of higher, in oils by lead salt separation and TLC 186
separation of, from methyl esters by carbon-active silica gel TLC 317
Tetraenoic, isolation and analysis of, with complementary TLC/GLC 425
TLC of; detection of small quantities of higher saturated, by 186
on silanized silica gel 518
TLC, preparative, of higher 66
Trienoic, isolation and analysis of, with complementary TLC/GLC 425
Unsaturated; comparison of GLC, thiocyanogen number, and lead salt–ether methods 418
sulfur dichloride diadducts of, derivatives of, reactions with nucleophiles 313
α,β-Unsaturated, separation of *cis* and *trans* isomers of, by TLC 188
Unsaturation, via hydrogenation determination of, on a micro and ultramicro scale 311
Volatile; from rumen fluid by GLC 137, 359, 364
in aqueous solution by GLC 263

Fatty alcohols
Chromatography of 411
GLC of; C_1–C_7 254
human hair lipids, high molecular weight alcohols 138
Higher, fuchsin dyes in TLC of 593
Identification of, in complex mixtures 67
Long-chain aliphatic compounds, TLC of 521
Long-chain, GLC of 379
4′-Nitroazobenzene-4-carboxylic acid esters of, separation by GLC 474
Photometry of, using vanadium complexes as reagents 529
Polyethoxylates, TLC and foaming properties of 121
Straight-chain saturated, TLC of 199
Technical, determination of alkanes in 118
TLC of straight-chain saturated and unsaturated alcohols 199
Unsaturated, TLC of 199
Water solubilities of tetradecanol and hexadecanol 259

Fatty aldehydes
2,4-Dinitrophenylhydrazones, conversion of to free aldehydes or dimethyl acetals at room temperature 202
Identification of artifact formed during methylation of 213
Test for aromatic and unsaturated 193

Free acids: Determination of, by automated ion-exchange colorimetry 415

Free fatty acids
Automated colorimetric determination of in biologic fluids 187
In serum, by colorimetry 516
Plasma; semiautomated determination of 410
TLC of, by single development 384
Quantification of, by TLC 148
Quantitative TLC of, from rat liver 383

ENTRY NO.

Rapid colorimetric micromethod for 314
Separation of C_2–C_{18} in dairy products by GLC 9
Serum, rapid separation by TLC from hydrocortisone, cholesterol, triglycerides, phospholipids, and cholesteryl esters 385
Spray sequence for the detection of 413
Use of a computer in determination by GLC of concentration and identification of 249

Free fatty aldehydes: Conversion of 2,4-dinitrophenylhydrazones to 202

Galactolipids: Components of broad bean leaves, separation and estimation of 611

Galactosamine: Separated from glucosamine by paper chromatography 224

Galactosyl diglycerides: Mono- and di-, quantitative analysis of, in plant tissue 444

Gangliosides: Densitometric microdetermination of, from total lipid extract after TLC 541

Glucosamine: Separated from galactosamine by paper chromatography 224

Glyceraldehyde: Enzymic assay of 206

Glycerides
Blood, estimation of 322
Detection of rubberseed oil in edible oils, by paper chromatography 204
Fatty oil occurrence, detection and prevention of cyclization during hydrogenation of 73
Isomerizations in lipid chemistry 78
Periodate microanalysis for oxidations of glycerol from 72
Segregation of fish oils with liquid propane and butane 428
Solid content of fats and oils, by NMR spectrometry 596
2-Thiobarbituric acid, used in an improved procedure for measuring autoxidation in fish oils 80

Glycerol
Enzymic assay of 206
Isolation and assay of, in plasma 74
Trace amounts determined by using anthrone 532

Glycerol ether esters: Long-chain IR spectral shifts 530

Glycerol ethers
Derivatives from ether, IR spectra and polymorphism of 77
Long-chain, IR spectral shifts 530
Naturally occurring long-chain ethers, esters, and ether esters, absorption bands and frequency shifts in IR spectra of 530

Glycolipids
Amino sugars, sugars, and sialic acid, sensitive location reagent for the simultaneous detection of 226
Determination of sulfate and sulfur with barium perchlorate 219
Di- and monogalactodiglycerides in comparison of column chromatographic methods for the quantitative determination of 225
From photosynthetic bacteria, isolation and characterization of 92
Gangliosides, hydrolysis by neuraminidase from calf brain 443
Gluco- and galactocerebrosides, semiquantitative paper chromatography of 335

ENTRY NO.

Glycosphingolipids, neutral, TLC of 96
Hexose, modifications of two-color reactions of, with cysteine and sulfuric acid 334
Hexoses, spectrometry of, after reaction with concentrated sulfuric acid 336
Microdetermination of sulfur in organic compounds by perchloric acid digestion 221
Mono- and digalactodiglycerides in fresh alfalfa, comparison of column chromatographic methods for the quantitative determination of 225
Neuraminic, two dimensional TLC of 542
Neutral ceramide, mammalian tissue, quantitative isolation of by chromatography 442
Neutral glycosyl ceramides in human blood, quantitative determination of 337
Pentoses, spectrometry of, after reaction with concentrated sulfuric acid 336
Quantitative estimation of glucosamine and galactosamine in mixtures, by paper chromatography 224
Sensitive location reagent for the simultaneous detection of sugars, amino sugars, and sialic acids 226
Sialic acids; amino sugars and sugars, sensitive location reagent for the simultaneous detection of 226
automated determination of 539
levels in blood serum, automatic determination of 441
Sphingolipids, neutral separation from sulfatides by TLC 96
Sugars, amino sugars, and sialic acids, sensitive location reagent for the simultaneous detection of 226
Trehalose, natural and synthetic diesters of, mass spectrometry of 333
Ultramicrodetermination of sulfurs in organic substances 222
Uronic acids, spectrometry of, after reaction with concentrated sulfuric acid 336
Hemin: Eythrocyte in silica gel plates separated from porphyrins and lipids on TLC 569
Herring oil: Rancidity, by GLC 366
Hydrocarbons
Alkanes; and squalane, by GLC 267
determination of, in technical fatty alcohols 118
Analysis of compressed gas supplies, rapid-response gas chromatograph for 268
Anesthetics in blood, determination of by GLC 117
C_1–C_{10}, GLC analysis of, by open tubular columns with on-column injection 276
GLC identification of, using retention indices 274
GLC of residual solvents 27
GLC separation of, with water as the liquid phase 365
C_1–C_4 in sea water, by GLC 272
Quantitative TLC of, from rat liver 383
Sesquiterpene, high resolution IR spectra of 340
Keto acid methyl esters: GLC of 18
Lecithinase: Clostridial, demonstrated by TLC 349
Lipase
Fluorimetric assay for hydrolytic activity, using fatty acyl esters of 4-methylumbelliferone 348

ENTRY NO.

Hydrolysis of pancreatic, for triglyceride analysis 203
Serum, determination of 621
Staphylococcal, demonstrated by TLC 349
Lipid bilayers: Structure and stability with retinol and tocopherol 344
Lipids
Arterial wall, thin-layer histochromatographic analysis of 280
Casein components, soluble in chloroform–methanol 2:1 and 50% aqueous ethanol 144
Conjugated unsaturated, polarography of 198
Correlative histochemistry 33
Detection and isolation of minor constituents 284
Detection by TLC 37
Determination by paper chromatography 30
Determination of peak areas by GLC 8
Dioctyl phthalate from milk, method of isolation and detection 31
Diol; mass spectrometry of 377
microacetylation of, for GLC 376
Erythrocyte, in silica gel plates separated from porphyrins and hemin on TLC 569
Extraction and estimation of, in serum 36
Extraction of; by fixatives from cryostat sections of rat hypothalamus by TLC 283
from lean raw beef by various methods 34
Fat adsorption studies in the rat, lipid-soluble inert indicator in 40
From a single rat liver homogenate 39
From a subcellular fraction 39
GLC of 11
Identification of diols and triols, by GLC 25
In cereals, quantitative extraction of 483
In human hair, high molecular weight alcohols of 138
In milk, method for isolation and detection of dioctyl phthalate 31
In rat liver and intestine, by silicic acid column chromatography 149
Interesterfication on TCL with sodium methylate to make fatty acid methyl esters 421
Labeled, preparation of 567
Methods of isolation and identification of volatile compounds in 28
Microapparatus for methanolysis of 473
Muscle, determination of 145
Neutral; quantitative determination of alk-1-enyl- and alkyl-glyceryl ethers in 533
quantitative TLC, using semispecific colorimetric and titrimetric techniques 482
Nitrogen, a simple procedure for the estimation of 89
Plasma, neutral, quantification of by TLC 148
Polar, from milk and mammary tissue, two-dimensional TLC of 282
Production of methyl esters of fatty acids as artifacts 32
Purification of extracts, using Sephadex LH-20 281
Quantitative microdetermination of carbon from, in microorganisms 35
Quantitative TLC of, from rat liver 383
Separation of retinol from 233
Serum analysis, automated techniques 29

ENTRY NO.

Serum or plasma, concentration of methanolic extracts of, methyl ester artifacts 32
Serum, quantitative determination of, with micro silicic acid columns 147
Serum, rapid analytical system for determining 146
Spleen, by TLC 150
Staining, attaching frozen sections to slides for efficient handling 41
TLC interesterification with sodium methylate to make fatty acid methyl esters 421
TLC of, spleen lipid estimation 150
Total; fecal, containing medium-chain triglycerides 382
in serum, quantitative determination of 381
Triols; mass spectrometry of 377
microacetylation of, for GLC 376
Urinary constituents from, application of TLC zonal ^{14}C-profile scans to the analysis of 568
Lipoprotein apoprotein: Lipid-free plasma membrane isolated by gel filtration 110
Lipoproteins
Blood, estimation of, by radial immunodiffusion after agarose gel filtration 109
Dextran sulfate–low density, sedimentation properties of 235
Electrophoresis; in agarose gel 553
on gelatinized cellulose acetate 456
β-, Extraction and immunological assay of, from human aortic intima 108
β-, Fixation of streptolysin O and digitonin by 619
Human serum; isolation of, by zonal ultracentrifugation 554
separation and size determination of, by agarose gel filtration 237
β-, Immunochemical determination of 236
β-, Low density, solubility of, in the presence of dextran 551
Monolayers, properties of in OsO_4 solutions 346
Pig serum, gel filtration of 620
β-Protein, immunological evidence for the presence of, in normal and abetalipoproteinemic plasma 107
Serum; of low density, preparation and purification of 345
separation and quantitative analysis of, by electrophoresis on cellulose acetate 550
Serum β-, immunocrit determination of the significance of disagreement between serum cholesterol levels and 347
Staining after polyacrylamide disc electrophoresis of chick serum 552
Sudan black staining on gelatinized cellulose acetate 456
Liposomes: Liver, isolation and chemical characterization of 151
Mass spectrometry
GLC and; efficiency of molecule separators in 20
for identification of butterfat from fatty acids by 21
Membranes: Lipid with aqueous interfaces, apparatus designs and study methods 557
(+)-Methyl 2L,4L-dimethyl hexanoate: Synthesis of, involving separation of diastereoisomers by preparative GLC 15

ENTRY NO.

(−)-Methyl 2L,4L-dimethyl hexanoate: Synthesis of, involving separation of diastereoisomers by preparative GLC 15
C-Methyl groups: Submicromethods for the determination of 62
Methyl octadecadienoate: Isomers of, by silver-resin column chromatography and preparative GLC 5
Mevalonate: Metabolities of, improved ion-exchange procedure for the chromatography of 99
Monogalactosyldiglycerides: Di- and, separation of mono- from spinach leaves with Sephadex LH-20 93
Monoglycerides
GLC of 23
Plasma, TLC of, by single development 384
Quantitative TLC of, from rat liver 383
Monomethyl ethanolamine: From lipids, quantitative GLC of 261
Mycolic acids: GLC and mass spectrometry of 127
Ozonolysis: Olefin position in microgram range of alkylidene, by 2
Periodate oxidations: Microanalysis for 72
Phospholipids
Acyl carnitine, column separation from phospholipids 536
Amines, determination of as complexes with picrate 326
Ammonium ions, quaternary determination of as complexes with picrate 326
Automated analysis of samples containing low concentrations of inorganic phosphate 325
Baker's acid hematin test for detection of 212
Cardiolipin, production of antibody to 327
Carnitines, acyl, column separation from phospholipids 536
Cephalin, in serum, determination of 217
Detection method, usefulness of 83
Differential staining of, in gelatin-embedded frozen sections 481
Glycerolphosphonolipids, detection and identification of, by paper chromatography of their saponification products 429
Glycerophosphatides, degradation of, during storage of saline-washed, saline-suspended red cells at 20°C 216
Histological staining by the OTAN reaction 599
In biological fluids and organ biopsies, direct quantitative TLC of 431
Lecithin; determination of molecular species of, from erythrocytes and plasma 90
in serum, determination of 217
quantitative recovery of, after argentation chromatography on thin layers 433
Lysolecithin, in serum, determination of 217
Lysophosphatidyl ethanolamine, fractionation by argentation adsorption on TLC 608
Minor acidic, from mammalian tissue extracts, quantitative isolation of 432
Nitrogenous, differentiation of, by IR absorption between 9 and 11 microns 438

ENTRY NO.

Phosphatide plasmalogens, by two-dimensional reaction TLC 609
Phosphatides; alkenyl acyl and diacyl ethanolamine, by argentation adsorption TLC 608
alkenyl acyl- and diacyl-, reaction TLC in mixtures of 538
column separation from acyl carnitines and carnitine 536
Phosphatidyl choline, mixture of alkenyl acyl- and diacyl-, fractionation of 535
Phosphatidyl ethanolamine; fractionation by argentation adsorption on TLC 608
from mammalian tissue extracts, quantitative isolation of 432
separation of dinitrophenylated and methylated, of hens' eggs 214
Phosphatidyl inositol, simplified preparation of 209
Phosphatidyl serine from brain, preparative isolation of 331
Phosphorus analysis, automated for low inorganic 325
1,2-^{14}C-Phosphoryl ethanolamine, chemically synthesized, automatic radio-chromatographic separation and determination of 330
Plasma, TLC of by single development 384
Plasmalogens of; role in embryonic development in bovine brain 439
simultaneous determination of 439
Polyphosphoinositides, extraction from the rat brain 324
Quantitative assay of, in rat heart muscles by TLC 440
Quantitative determination of alk-1-enyl and alkylglyceryl ethers in 533
Quantitative TLC of, from rat liver 383
Rabbit liver, efficient elution of, from thin-layer plates 82
Rabbit plasma, efficient elution of, from thin-layer plates 82
Rat liver, quantification by two-step TLC 604
Renin preinhibitor in canine and human blood 329
Semilyso-bis-phosphatidic acid, isolated from rabbit lung 430
Separation of retinol from 233
Serum, separation from cholesteryl esters, triglycerides, cholesterol, hydrocortisone, and free fatty acids by rapid TLC 385
Spray modified for the detection of on thin-layer chromatograms 607
TLC of; elution of rabbit liver and plasma phospholipids from thin-layer plates 82
on alumina 537
With Baker's detection of nonspecific esterase 242

Phosphorus determination

According to Hurst with a $SnCl_2$/hydrazine sulfate reagent 601
Ammonium phosphomolybdate precipitation with chloromolybdate for semimicro analysis 600
Bacterial lipid 606
By atomic absorption and spectrophotometry 218
By flame spectrophotometry 332
Increased sensitivity of detection for high-voltage electrophoresis of, in salicylate buffer with boric acid 602
Inorganic 603
Lipid, in serum, micromethod for routine estimation of 534
Molybdenum blue method; for determination of phosphate 210
mechanistic investigation of 85
Nucleic acid microdetermination of 598
Organic, assay for fractions in microgram quantities 328
Phosphate, an automatic reaction rate method for the determination of 84
Photometric, by diazocoupling with oxyquinolinium phosphomolybdate 81
Spin-spin bond in NMR spectra of organophosphorus compounds 87
Titrimetric method for 605
Ultramicro- 211
With hydroxamic acids using a chemical analogue of cholinesterase inhibition method 86

Phosphorus pentoxide: Products of the reaction between alcohols and 594

Plasma membrane proteins: Lipid-free, isolation of, by gel filtration 110

Plasmalogens

Determination of, after using 2,4-dinitrophenylhydrazine–phosphoric acid reagent 215
Identification of artifact formed during methylation of aldehydes 213

Polyglycerols: Fatty acid esters of, by GLC 22

Porphyrins: Erythrocyte in, separated from hemin lipids by TLC on silica gel plates 569

Prostaglandins: Identification of submicrogram amounts of 520

Proteolipid protein: Rapid purification of, adaptable to large quantities of 238

Retinol

Effect of, on structure and stability of lipid bilayers 344
Role of in stabilizing lecithin monolayers 346

Retinol acid: Stability of with UV irradiation 453

Ricinoleic acid: Rapid separation from its impurities, by GLC 128

Saccharose: Paper chromatography of higher esters of fatty acids with 71

Spectrophotometry: Determination of saturated and α,β-unsaturated carbonyl by, at a single wavelength 65

Sphingolipid bases: Improved reagent for trimethylsilylation of 91

Sphingolipids: Separation of ceremide by paper chromatography 94

Sphingomyelins

In serum, determination of 217
In various human body tissues, quantitative paper chromatography of 435
Paper chromatographic identification of, and *N*-acyl derivatives 436
Sphingosine base content in, effect of hydrolytic conditions on 434

Sphingosine bases

Erythro, isolated from human brain, chromatographic identification of 437

ENTRY NO.

Identification of degradation products from different acid hydrolytic conditions 540
Sphinogosines: Paper chromatography of dinitrophenyl derivations of, and their degradation products 88
Steroids
Adrenocortical; 375
derivatives prepared using bis-trimethylsilyl acetamide 375
GLC of 369, 375
Aldosterone; human urinary, GLC of 251
in human peripheral plasma by double isotope dilution 397
in peripheral plasma by ^{3}H-acetic anhydride 158
isomerization of radioactive 42
metabolite determination in 172
purification of the 17α- and β-isomers 42
separation from cortico-, by high-voltage paper electrophoresis 292
Tetrahydro-, urinary; quantitative determination of 394
a simple procedure for the estimation of 173
by BTC microreaction 297
by TLC on polyamide 297
radioactivity test of TLC isolation on polyamide 296
Anagestrone acetate in fertility control tablets, GLC of 578
Androsterone, urinary; dehyroepi-, unconjugated from pooled cord blood, isolation and identification of 400
estimation with 2,4-dinitrophenylhydrazine 53
Angular methyl groups in substituent, effects on the NMR signals of 169
Bufo-, separation of, by eluting dry-column chromatography on silica gel 48
17-Carboxylic acids, optical rotatory dispersion 164
Chromatography of, use of Sephadex LH-20 in separation of 17-hydroxycorticosterone 176
Collection of eluted, from a gas chromatography column 469
Conjugates, extraction with a neutral resin 486
Cortico, fluorimetry of, in plasma 152
in plasma, fluorimetry of, interference of heparin containing benzyl alcohol in 186
separation of aldosterone from, by high-voltage paper electrophoresis 292
spectrophotometric quantification of 166
urinary, sequential solvent extraction of, and its clinical application 288
Corticoids, in blood, determination of, using the in vitro resin uptake of ^{3}H-prednisolone 396
Corticosterone; in human plasma, cortisol and, simultaneous fluorometric determination of 495
metabolite determination in 172
Cortisol; analyzed in serum with other steroids during the menstrual cycle and early pregnancy 286
in human plasma, corticosterone and, simultaneous fluorimetric determination of 495

ENTRY NO.

in plasma and biopsy tissue, determination of, by a spectrophotofluorimetric micromethod 300
metabolite determination in 172
plasma, enzymatic fluorimetric determination of binding capacity 170
plasma, fluorimetry of, in the presence of pregnanetriol and pregnanetriolone 502
tetrahydro-, urinary, GLC of 468
tissue, decreased concentration of, in menopause, by a new micromethod 52
urinary, clinical evaluation of, by competition protein-binding radioassay 497
urinary, metabolites, TLC of 404
Cortisone, tetrahydro-, urinary, GLC of 468
David-chromogenicity of 55
Dehydroepiandrosterone; in human plasma, determination using Bromine-82 175
urinary, estimation with 2,4-dinitrophenylhydrazine 53
11-Deoxy-17 Keto-; analyzed with other steroids during the menstrual cycle and early pregnancy 286
human urinary, GLC of 139
11-Deoxy-17 Oxo-, method for estimation of in urine 43
C_{19} and C_{18} Derivatives, GLC of 132
Dienestrol, GLC of, in presence of methyltestoterone 572
Diethylstilbestrol, quantitative determination of by TLC 193
Digitoxin, levels in plasma, enzymatic assay of 570
20,21-Dihydroxycortico-, GLC of as C-20,21-acetonides 289
17,21-Dihydroxy-20-keto-, urinary 291
C-13-Epimeric, 17-oxo- by GLC 264
Epimerizable, GLC stability of 476
16-Epioestriol-3-glucosiduronate, in human pregnancy urine 50
16-Epioestriol-16(17?)-glucosiduronate, in human pregnancy urine 50
Epitestosterone; identification and measurement of, in the sulfate fraction of plasma of normal men 290
separated from testosterone by silica gel TLC 501
urinary, in men, women, and children 576
urinary, in prepubertal children 275
Estradiol benzoate, from mixtures with testosterone and progesterone, by TLC 386
Estradiol; by Kober color and Ittrich fluorescence 488
ethinyl, automatic determination of 302
17-β-; in peripheral human blood, measurement using ^{35}S pipsyl chloride 485
in plasma of domestic fowl 398
Estrane and D-homoestrane series, *cis-trans* isomerism in 51
Estra-1,3,5(10),16-tetraen-3-ol, in pregnancy urine, identification of 402
Estriol: by Kober color and Ittrich fluorescence 488
in plasma, by GLC 269
in pregnancy urine, TLC of 154
in urine by GLC 262
urinary, in pregnancy, determination of 168

ENTRY NO.

Estrogen glucosiduronates, urinary, separated from estrogen sulfates on diethylaminoethyl–Sephadex columns 391
Estrogen sulfates, urinary, separated from glucosiduronates on diethylaminoethyl–Sephadex columns 391
Estrogens; analysis of metabolites by isotope derivative and fluorimetry 293
biochemical assay 392
conjugated, in bovine urine, gel filtration of 395
plasma, GLC of 143
pregnancy urine 487, 500
separation of, on Sephadex 178
simultaneously analyzed, in serum with other steroids during the menstrual cycle and early pregnancy 286
sulfates, separation from oxidation products 299
urinary 47
urinary, by GLC 478
urinary, influence of metabolites of bis(*p*-acetoxyphenyl)-cyclohexylidenemethane on the estimation of 287
urinary, measurement of, using adsorption on Sephadex 177
Estrone; by Kober color and Ittrich fluorescence 488
in blood plasma, determination of, by GLC 153
in peripheral human blood, measurement with ^{35}S pipsyl chloride 485
in plasma of domestic fowl 398
Etiocholanolone; rat urinary, by GLC 388
unconjugated, in human plasma, by GLC 472
urinary, estimation with 2,4-dinitrophenylhydrazine 53
GLC of; adrenocortico- 369
aldosterone in human urine 251
11-deoxy-17-keto-, in human urine by standard column 139
estrogens, with an electron-capture detector 143
estrones, free, in blood plasma, electron-capture detection of 153
glucuronosides 24
17-keto- 253
17-keto-, and progesterone metabolites 253
17-keto-, pregnanediol, and pregnanetriol 126
mass spectrometry and 262
3-oxo-Δ^4-enol heptafluorobutyrates 3
pregnanediol, urinary 174
retention behavior 140
retention times of C_{19} and C_{18} derivatives 132
sodium bismuthate as an oxidant 155
specificity of estriol in urine, by 262
unconjugated etiocholanolone, in human plasma 472
urinary 471
GLC/TLC of 360
Glucoronides; analytical separations 45
GLC of 24
Hormonal, GLC of 371
Human, analytical separations 45
Hydrocortisone, in serum, TLC rapid separation from cholesterol, triglycerides, phospholipids, cholesteryl esters, and free fatty acids 385
Hydroxy-, recovery of trimethylsilyl ethers after TLC 54
17-Hydroxy-, quantification of urine 162
17-Hydroxycortico-; chromatographic separation on Sephadex LH 20 176
urinary, automated method for determination of 159
Δ^5-3β-Hydroxy dehydrogenase, histochemical demonstration of, in porcine 239
17β-Hydroxy dehydrogenase, histochemical demonstration of, in porcine 239
16α-Hydroxydehydroepi-, unconjugated, from pooled cord blood, isolation and identification of 400
17-Hydroxy-11-oxy-, quantification of urinary 162
2-α-Hydroxypregn-4-en-3-one, double isotope derivative assay for 305
20α-Hydroxypregn-4-en-3-one, in rat ovaries during prooestrus, oestrus, and pseudopregnancy 165
15α-Hydroxyprogesterone, isolation of from human pregnancy urine 44
17-Keto-; direct spectrophotometric quantification of, on TLC 574
fractionation and determination of, by TLC and column chromatography 157
in plasma extracts, total delipidation of 499
neutral urinary, model based on TLC of 160
quantification of urinary, by extraction of unionized reaction products 162
total neutral urinary, colorimetric estimation of 389
urinary, by TLC 294
urinary, GLC of 253
urinary, quantitative estimation of 393
Keto-, conjugated; estimation of, with 2,4-dinitrophenylhydrazine 53
ketogenic and, analyzed with other steroids during the menstrual cycle and early pregnancy 286
microdetermination of, as 2,4-dinitrophenylhydrazones 496
sodium borohydride in the spectrometry of 390
Ketone methoxime derivatives, formation and GLC behavior of 492
Ketones, selective acetalizations of, with [tris-phenylphosphine]-rhodium(1)-chloride 503
Labeled, specific activities of, by GLC 467
Liquid–gel partition of, and derivatives 163
Mass spectrometry of 51
Measurement in body fluids by competitive protein-binding radioassay 171
Monocyclic alcohols, mass spectrometry of 579
C_{19}, Natural, in human pregnancy 400
3-Oxo-Δ^4-, by GLC 3
16- and 17-Oxo-, isomeric, separation by GLC 561
17-Oxo-; neutral urinary determination by the Zimmerman reaction 156
sulfates in human plasma 301
TLC on silica, separation and derivatives of 303
11-Oxy-, quantification of urinary 162
Pharmaceuticals, by TLC 167

ENTRY NO.

Pregnane, C-17, C-20, and C-21, contribution to polarity of hydroxyl, by paper chromatography 577
Pregnanediol; analyzed with other steroids during the menstrual cycle and early pregnancy 286
by GLC, normal human urinary 126
comparison of methods for determination 304
in pregnancy urine, TLC of 154
in urinary extracts, by GLC 363
urinary, comparison between chemical and gas chromatographic methods 174
Pregnanetriol, by GLC, normal human urinary 126
Pregnanolone, in urinary extracts, by GLC 363
Pregnene-; 3,20-dione series, determination of the configuration at C-17, by mass spectrometry 181
$3\beta,17\alpha,20\alpha$-triol, urinary, GLC of 367
Progesterone; determination of in biological specimens 179
double isotope derivative assay for 305
fluorescence reactions of 504
from mixture with estradiol benzoate and testosterone, by TLC 386
hydroxy, mass spectral correlations 573
in rat ovaries during prooestrus, oestrus, and pseudopregnancy 165
metabolites, urinary, GLC of 253
pregn-4-ene-3,6,20-trione formed by the alkaline oxidation of, and its role in the fluorimetric determination of 494
Progestins in rat ovaries, microdetermination of 165
Quantitative elution of microgram quantities from silica gel layers 575
Sapogenins, monohydroxy saturated, in plant materials 612
Δ-24 and C-24 saturated, NMR and IR spectra 399
$\Delta 16$-C_{19}, separation by TLC 49
Solvolyzable, in human plasma, GLC/mass spectrometry of 401
Testosterone; fluorimetric determination of, after TLC isolation from human urine 46
from mixture with estriol benzoate and progesterone 386
glucuronoside, urinary, double isotope dilution derivative technique for 498
in male plasma, rapid method for the estimation of 298
in plasma, determination of by electron-capture detection of testosterone diheptafluorobutyrate 490
rat urinary by GLC 362
separated from epitestosterone by silica gel TLC 501
urinary, by fluorimetry 491
urinary, in men, women, and children 576
urinary in prepubertal children 275
TLC, recovery of trimethylsilyl ethers of hydroxy 54
TLC of; 17-keto- 160
pharmaceuticals 167
separation and characterization 161
testosterone 46
Trimethylsilyl ethers, quantitative TLC of 387

ENTRY NO.

Urinary; automated analysis, using quantitative paper chromatography and digital computer spectra, by GLC 571
Water-soluble, separation of carotenoid and, by DEAE-cellulose column chromatography 471
Zimmerman reaction, determination of neutral urinary 17-oxo- 489
Sterols 156
Cholestanols, characterization by TLC and GLC 510
Cholestanones, characterization by TLC and GLC 510
Coelenterates, occurrence of gorgosterol (C_{30} sterol) in 508
Ergosterols, influence of oxidation product and extraction procedures on, in dry yeast 58
From two species of blue-green algae, isolation and identification of 511
GLC–mass spectrometry combined 10
GLC of 183
Gorgosterol in coelenterate zooxanthellae 508
Mass spectrometry of unsaturated, biosynthetically related to cholesterol 309
Neutral derivatives, in human feces, quantification of after purification on lipophilic Sephadex gels 509
Pollens Δ-7, isolation of one series of 184
Rat harderian gland, TLC of an unknown which is compared to other known standard sterols 566
Separation of, by column chromatography 407
TLC of 183
Unesterified, rapid method for isolation of 310
Unsaturated side chains, mass spectrometric fragmentation of 408
Sulfate
Determination of by titration with barium perchlorate 219
In anionic sulfonate and surfactants 119
Polarographic microdetermination of 223
Sulfatides
Dichroism of cresol violet-stained cerebroside sulfate 220
Quantitative determination by spectrophotometry 610
Sulfolipids: Quantitative analysis of, in plant tissues 444
Surfactants
Anionic, "acids" pyrolysis-capillary chromatographic analysis of 120
Nonionic, "acids" pyrolysis-capillary chromatographic analysis of 120
Sulfate, potentiometric titration of 119
Terpenes
Cassia, steam-volatile oil in, determination of 614
Coenzyme Q_{10}, in human blood, determination and levels of 545
GLC of valerian sesquiterpenoids 129
Isomeric methyltocols and derivatives, GLC of 339
Mevalonate, metabolites of, improved ion-exchange procedure for the chromatography of 99
Mono-, alcohol trimethylsilyl ethers of, by TLC 543
Monohydroxy saturated steroidol sapogenins, in plant material, quantitative estimation by densitometric TLC 612
Polyisoprene, distinguished from natural rubber by TLC 97

ENTRY NO.

Polyprenols, naturally occurring, NMR spectrometry 98
Sclareol, chromic oxidation of 613
Sesqui-, hydrocarbons; GLC of 270
in oil of Opoponax, identification of 544
Tri-; pentacyclic, TLC of 445
Valerian sesqui-, by GLC 129
Terpenoids: · GLC of stationary phases 124
2-Thiobarbituric acid: Measurement of autoxidation of fish oils by 80
Tocopherols
Contents in peanuts and soybean oil and influence of oxidation time with heating 549
TLC of 232
α-, TLC of, giving maximum separations 231
β-, TLC of, giving maximum separations 231
Triglycerides
Analysis by consecutive liquid–liquid partition and GLC 531
Calculating the ratio of each possible type of, in natural fat 75
Diglycerides mixture and, column chromatography of 321
Extraction procedure for plasma and serum determination 207
Fractionation of, by reversed-phase partition chromatography 205
GLC after liquid–liquid partition 531
GLC of 134, 378
In plasma and tissues 427
In serum, enzymatic determination of 323
Medium-chain, as part of total fecal lipids 382
Plasma, TLC of by single development 384
Quantitative TLC of, rat liver 383
Serum; bile salt–phospholipid complexes in, analysis of 597
TLC rapid separation from cholesteryl esters, phospholipids, cholesterol, hydrocortisone, and free fatty acids 385
Stereospecific analysis of 203
Use of a computer in GLC determination of concentration and identification of 249
Ubiquinones
GLC of 548
In human peripheral blood cells, cytochemical localization of 338
Vitamin A
Alcohol, estimation of, using UV irradiation 453
Aldehyde and acid, separate determination of 447

ENTRY NO.

α- and β-Carotene, determination of, in margarine 455
Fluorimetry of 546
In serum and liver biopsies, microdetermination of with $FeCl_3$ in acetyl chloride 343
Investigation of trimethylsilyl ether in, by GLC 26
β-Ionone, mass spectrum of 454
Metabolites in human serum and liver tissue, TLC of 342
β-^{14}C-, Preparation of 618
Vitamin D and E and, determination of, in medicine after TLC separation 102
Vitamin D
Esters, synthesized in rats, detection and identification of 448
Modification of USP assay to remove interference of Vitamin E 452
Related sterols, TLC of 617
Vitamins A and E and, determination of, in medicine after TLC separation 102
Vitamin D_2
Colorimetric determination of, with trifluoroacetic acid 446
Identification of; by alumina column chromatographic separation 451
by GLC 450
In UV irradiation, yeast influence on the decomposition of ergosterols and on the determination of 101
Vitamin E
Analysis by two-dimensional TLC 105
Common solvent impurity resembling 252
Effect of, on structure and stability of lipid bilayers 344
GLC of 230
In blood serum, microdetermination of 615
In *Euglena gracilis*, TLC as a separation method 616
Polarographic determination of, in oils and fats 299
Quantitative determination, a simple and rapid method for, in leaves 104
Role in stabilizing lecithin monolayers 346
TLC of, with precoated alumina sheets 341
α-Tocopheryl acetate, GLC of 464
Vitamins A and D and, determination of, in medicine after TLC separation 102
Vitamin K
GLC of 548
Isolation of, from animal tissue 547
Synthetic, GLC of 449
Vitamin K_1: GLC of 228
Vitamin K_5: By gas chromatography 4